Access DB# 145411

SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: Robert (Rob) Shaw Examiner #: 79521 Date: 2/15/05

Art Unit: 1626 Phone Number 30 2-0707 Serial Number: ~~10/772,036~~

Mail Box and Bldg/Room Location: 5A10/5C18 Results Format Preferred (circle): PAPER DISK E-MAIL

10/772036

If more than one search is submitted, please prioritize searches in order of need.

****

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

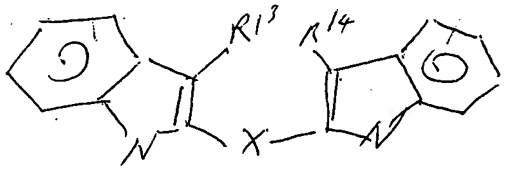
Title of invention: Analog of indole-3-carbinol

Inventors (please provide full names): ~~Sanjay Talwar~~ Long et al

Earliest Priority Filing Date: _____

**For Sequence Searches Only* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.*

Search cpd II



* X is O, S, C, N

* R is sub.

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STAFF USE ONLY	Type of Search	Vendors and cost where applicable
Searcher: Jan	~~NA~~ Sequence (#)	STN: ✓
Searcher Phone #: 22504	AA Sequence (#)	Dialog
Searcher Location	Structure (#): ✓	Questel/Orbit
Date Searcher Picked Up: 2/24/05	Bibliographic	Dr.Link
Date Completed: 2/24/05	Litigation	Lexis/Nexis
Searcher Prep & Review Time	Fulltext	Sequence Systems
Clerical Prep Time: 20	Patent Family	WWW/Internet
Online Time: 465	Other	Other (specify)

PTO-1590 (8-01)

STIC Search Report
Biotech-Chem Library

STIC Database Tracking Number: 145411

TO: Rei-Tsang Shiao **Location: 5a10 / 5c18** **Thursday, February 24, 2005** **Art Unit: 1626** **Phone: 272-0707** **Serial Number: 10 / 772036**	**From: Jan Delaval** **Location: Biotech-Chem Library** **Rem 1a51** **Phone: 272-2504** **jan.delaval@uspto.gov**

Search Notes

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FILE 'REGISTRY' ENTERED AT 07:34:47 ON 24 FEB 2005
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2005 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file
provided by InfoChem.

STRUCTURE FILE UPDATES:   23 FEB 2005  HIGHEST RN 836595-43-8
DICTIONARY FILE UPDATES:  23 FEB 2005  HIGHEST RN 836595-43-8

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 18, 2005

  Please note that search-term pricing does apply when
  conducting SmartSELECT searches.

Crossover limits have been increased.  See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more
information enter HELP PROP at an arrow prompt in the file or refer
to the file summary sheet on the web at:
http://www.cas.org/ONLINE/DBSS/registryss.html

=> => d que l19
L14                 STR
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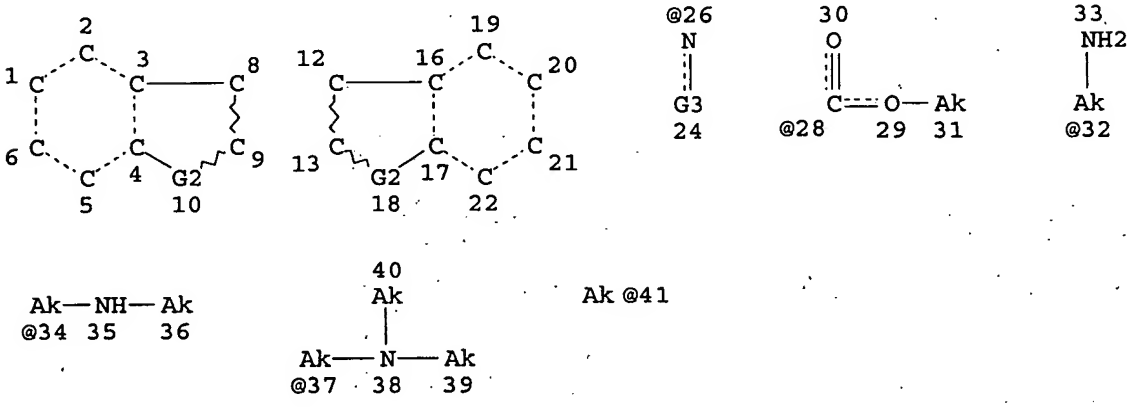


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VAR G3=41/28/32/34/37
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CONNECT IS E1  RC AT  31
CONNECT IS E2  RC AT  32
CONNECT IS E2  RC AT  34
CONNECT IS E1  RC AT  36
CONNECT IS E2  RC AT  37
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DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS  34

STEREO ATTRIBUTES: NONE
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L17              STR
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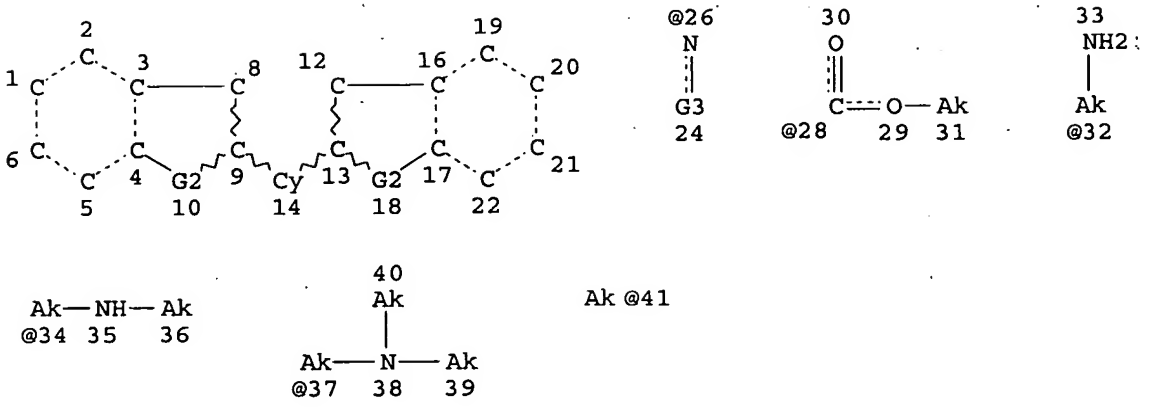

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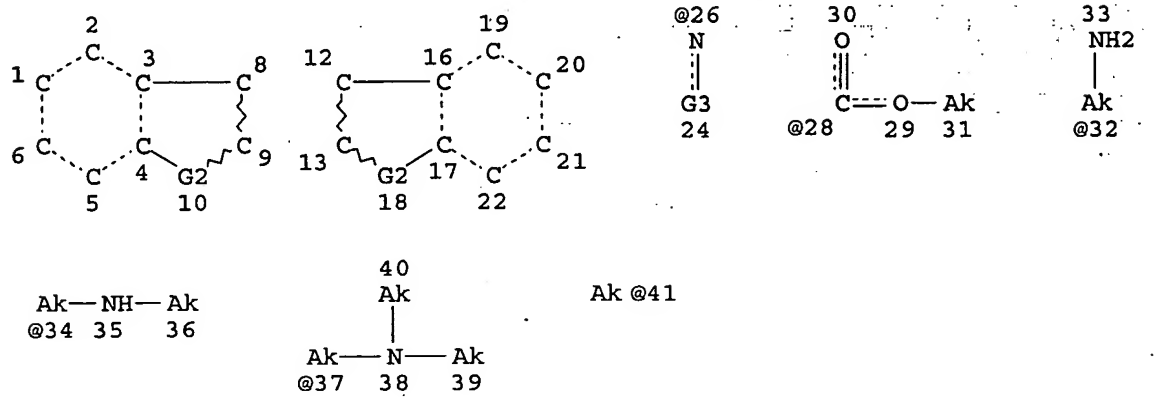
L14 STR



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CONNECT IS E1 RC AT 39
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DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

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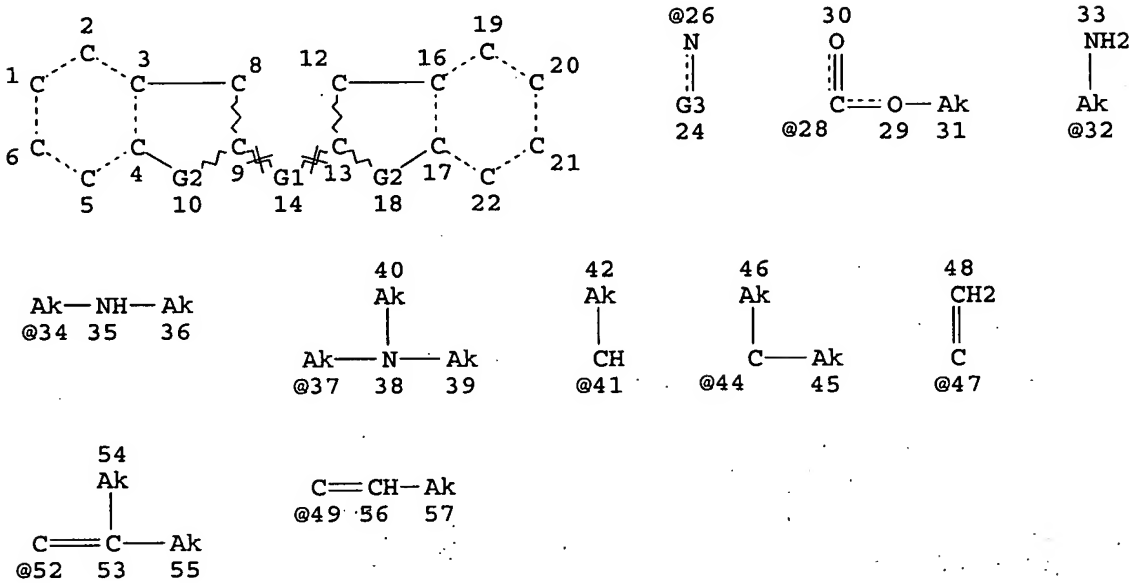

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DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
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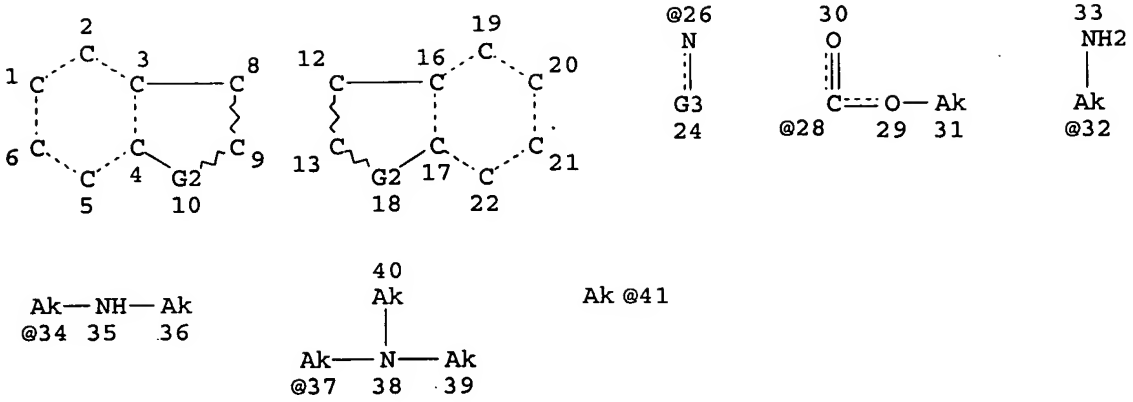

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CONNECT IS E2 RC AT 34
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CONNECT IS E2 RC AT 37
CONNECT IS E1 RC AT 39
CONNECT IS E1 RC AT 40
CONNECT IS E1 RC AT 41
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 34

STEREO ATTRIBUTES: NONE
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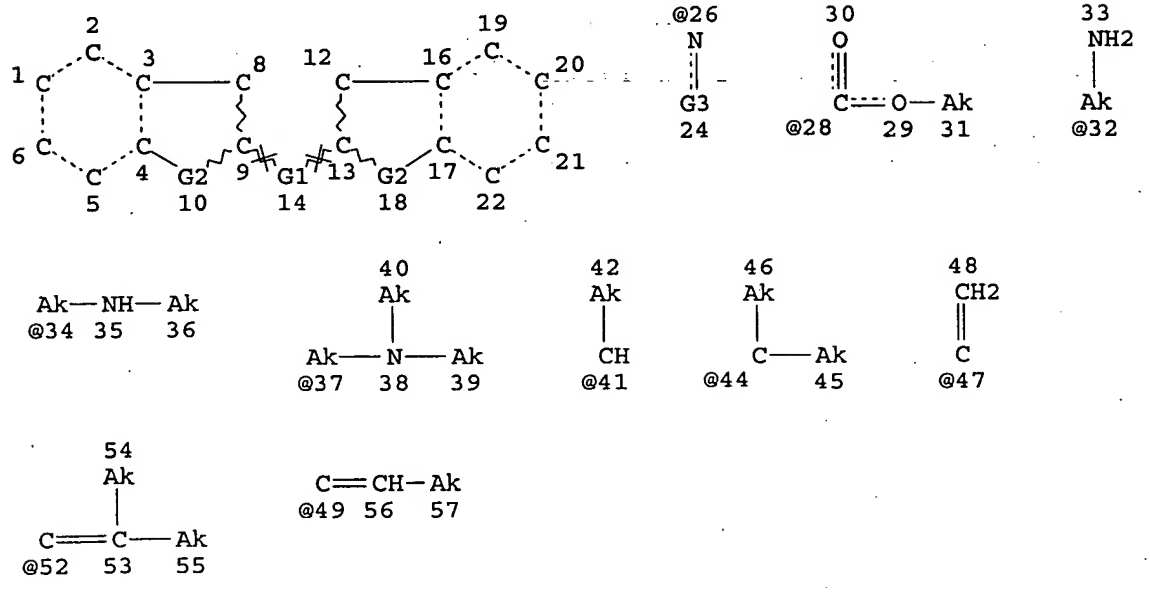

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NODE ATTRIBUTES:
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DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 48

STEREO ATTRIBUTES: NONE
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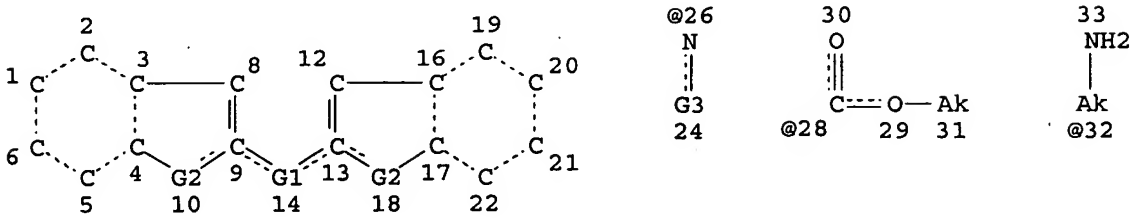

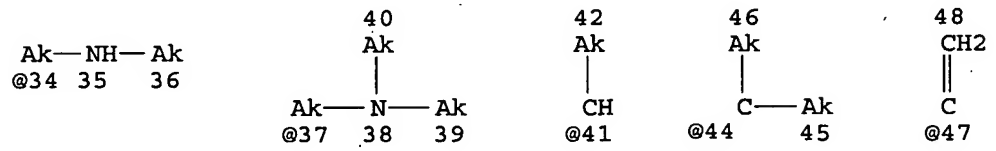

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CONNECT IS M1 RC AT 2
CONNECT IS M1 RC AT 5
CONNECT IS M1 RC AT 6
CONNECT IS M1 RC AT 8
CONNECT IS M1 RC AT 12
CONNECT IS M1 RC AT 19
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RING(S) ARE ISOLATED OR EMBEDDED
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STEREO ATTRIBUTES: NONE
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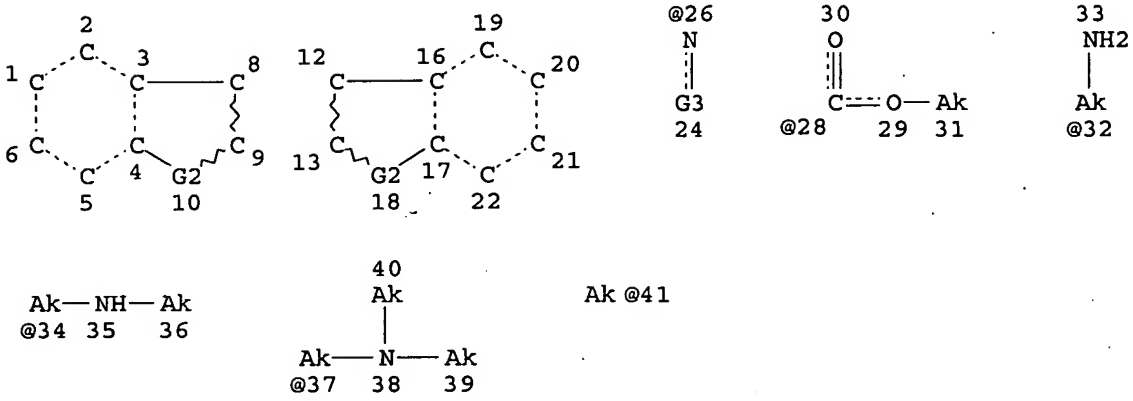

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VAR G3=41/28/32/34/37
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CONNECT IS E1 RC AT 36
CONNECT IS E2 RC AT 37
CONNECT IS E1 RC AT 39
CONNECT IS E1 RC AT 40
CONNECT IS E1 RC AT 41
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
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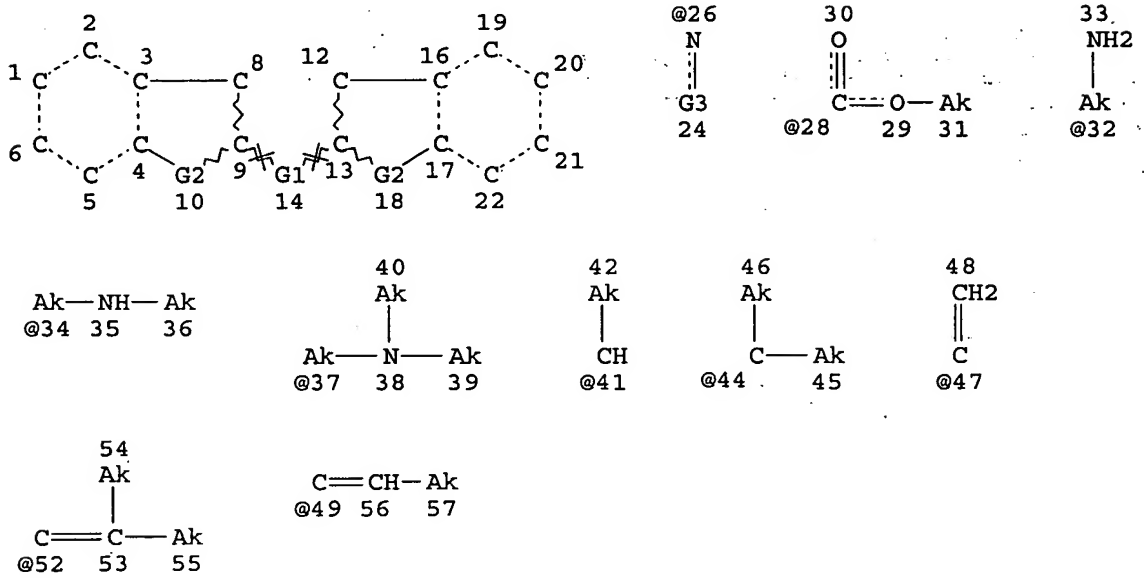
L20 STR



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VAR G3=AK/28/32/34/37
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 48

STEREO ATTRIBUTES: NONE
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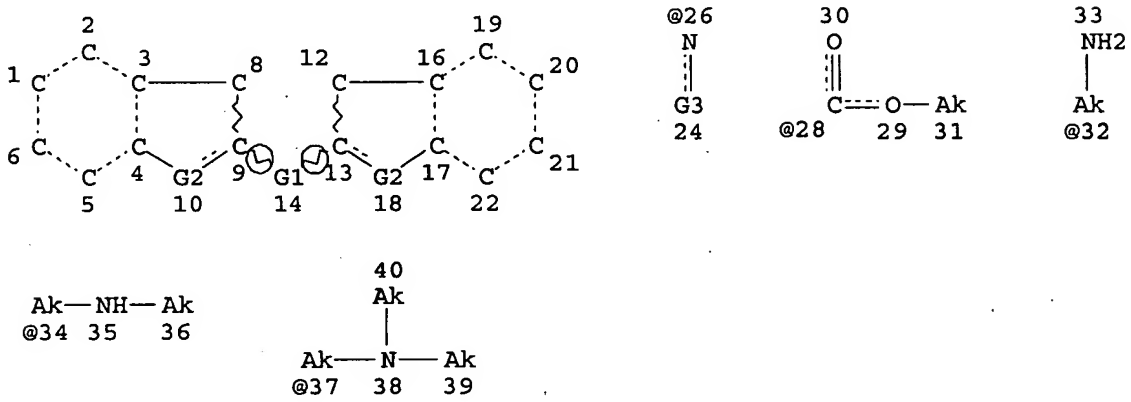
L36 STR



VAR G1=O/S/C/N
VAR G2=NH/26
VAR G3=AK/28/32/34/37
NODE ATTRIBUTES:
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CONNECT IS M1 RC AT 2
CONNECT IS M1 RC AT 5
CONNECT IS M1 RC AT 6
CONNECT IS M1 RC AT 8
CONNECT IS M1 RC AT 12
CONNECT IS M1 RC AT 19
CONNECT IS M1 RC AT 20
CONNECT IS M1 RC AT 21
CONNECT IS M1 RC AT 22
DEFAULT MLEVEL IS ATOM
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GRAPH ATTRIBUTES:
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NUMBER OF NODES IS 34

STEREO ATTRIBUTES: NONE
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L2 1 S L1 CSS SAM

FILE 'HCAPLUS' ENTERED AT 06:41:34 ON 24 FEB 2005

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                E SRI IN/PA,CS
L4         4197 S SRI INT?/PA,CS
L5        11957 S SRI?/PA,CS
                E JONG L/AU
L6           29 S E3,E4,E12
                E CHAO W/AU
L7           74 S E3,E11,E17,E24
L8         3312 S ?INDOL?(L)?CARBAZOL?
L9            1 S L4-L7 AND L8 NOT DIMER
L10           1 S L3,L9
                SEL RN

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L11          80 S E1-E80
L12          54 S L11 AND NR>=4
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L14             STR L13
L15          50 S L14
L16       65882 S L14 FUL
L17             STR L13
L18           2 S L17 SAM SUB=L16
L19         155 S L17 FUL SUB=L16
                SAV L19 SHIAO772A/A
L20             STR L1
L21           5 S L20 SAM SUB=L16
L22         623 S L20 FUL SUB=L16
                SAV L22 SHIAO772B/A
L23          25 S L11 AND L19,L22
L24          29 S L12 NOT L23
L25         108 S L19 NOT (CCS OR PMS OR MNS OR AYS)/CI
L26          10 S L25 AND (C24H20N2 OR C22H14N4O6 OR C32H30I2N2O4 OR C26H18N4O8
L27           8 S L26 NOT (3882-39-1 OR 161011-38-7)
                SAV L27 SHIAO772C/A
L28             STR L20
L29           7 S L28 CSS SAM SUB=L22
L30             STR L28
L31           3 S L30 CSS SAM SUB=L22
L32          82 S L30 CSS FUL SUB=L22
                SAV L32 SHIAO772D/A
L33          76 S L32 NOT L23
L34          72 S L33 NOT IUM
L35          10 S L34 AND (C21H22N2 OR C18H16N2S OR C28H26N4O4S3 OR C24H30N4S O
                SAV L35 SHIAO772E/A
L36             STR L30
L37           7 S L36 SAM SUB=L22
L38         109 S L36 FUL SUB=L22
                SAV L38 SHIAO773F/A
L39          90 S L38 NOT L23
L40          19 S L38 AND L23
L41          11 S L39 AND (C20H14N4 OR C19H15N3 OR C18H14N2S OR C20H17N3 OR C20
L42          10 S L41 NOT SPIRO
                SAV L42 SHIAO773G/A
L43          53 S L23,L27,L35,L42
                SAV L43 SHIAO773H/A
L44         514 S L22 NOT L38
L45         498 S L44 NOT L43
L46         333 S L45 NOT IUM
L47         321 S L46 AND 1/NC
L48         320 S L47 NOT IDS/CI
L49         289 S L48 NOT METHANONE
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L50            2 S L43
               SEL AN
               EDIT E81-E81 /AN /OREF

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L51            2 S E81-E82
L52            1 S L51 NOT POLLOCK ?/AU
L53           32 S L43
L54            1 S L52 AND L53
L55            1 S L53 AND L3-7
L56            1 S L10,L55
L57           30 S L53 NOT L54,L56
L58           26 S L57 AND (PD<=20020820 OR PRD<=20020820 OR AD<=20020820)
L59           28 S L54,L56,L58
L60            4 S L53 NOT L59

     FILE 'USPATFULL' ENTERED AT 07:34:31 ON 24 FEB 2005
L61            6 S L43

     FILE 'REGISTRY' ENTERED AT 07:34:47 ON 24 FEB 2005

=> fil uspatful
FILE 'USPATFULL' ENTERED AT 07:35:59 ON 24 FEB 2005
CA INDEXING COPYRIGHT (C) 2005 AMERICAN CHEMICAL SOCIETY (ACS)

FILE COVERS 1971 TO PATENT PUBLICATION DATE: 22 Feb 2005 (20050222/PD)
FILE LAST UPDATED: 22 Feb 2005 (20050222/ED)
HIGHEST GRANTED PATENT NUMBER: US6859937
HIGHEST APPLICATION PUBLICATION NUMBER: US2005039239
CA INDEXING IS CURRENT THROUGH 22 Feb 2005 (20050222/UPCA)
ISSUE CLASS FIELDS (/INCL) CURRENT THROUGH: 22 Feb 2005 (20050222/PD)
REVISED CLASS FIELDS (/NCL) LAST RELOADED: Dec 2004
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Dec 2004

>>>  USPAT2 is now available.  USPATFULL contains full text of the     <<<
>>>  original, i.e., the earliest published granted patents or         <<<
>>>  applications.  USPAT2 contains full text of the latest US         <<<
>>>  publications, starting in 2001, for the inventions covered in     <<<
>>>  USPATFULL.  A USPATFULL record contains not only the original     <<<
>>>  published document but also a list of any subsequent              <<<
>>>  publications.  The publication number, patent kind code, and      <<<
>>>  publication date for all the US publications for an invention     <<<
>>>  are displayed in the PI (Patent Information) field of USPATFULL   <<<
>>>  records and may be searched in standard search fields, e.g., /PN, <<<
>>>  /PK, etc.                                                         <<<

>>>  USPATFULL and USPAT2 can be accessed and searched together        <<<
>>>  through the new cluster USPATALL.  Type FILE USPATALL to          <<<
>>>  enter this cluster.                                               <<<
>>>                                                                    <<<
>>>  Use USPATALL when searching terms such as patent assignees,       <<<
>>>  classifications, or claims, that may potentially change from      <<<
>>>  the earliest to the latest publication.                           <<<

This file contains CAS Registry Numbers for easy and accurate
substance identification.

=> d l61 bib abs hitstr tot

L61  ANSWER 1 OF 6  USPATFULL on STN
AN     2004:204014  USPATFULL
TI     Analogs of indole-3-carbinol metabolites as chemotherapeutic and
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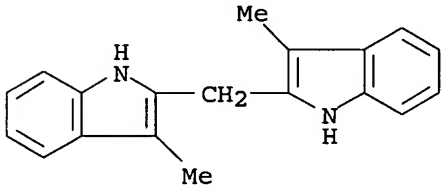
chemopreventive agents
IN Jong, Ling, Sunnyvale, CA, UNITED STATES
Chao, Wan-Ru, Sunnyvale, CA, UNITED STATES
PI US 20041579O6 A1 20040812
AI US 2004-772036 A1 20040203 (10)
RLI Division of Ser. No. US 2002-224979, filed on 20 Aug 2002, PENDING
DT Utility
FS APPLICATION
LREP REED & EBERLE LLP, 800 MENLO AVENUE, SUITE 210, MENLO PARK, CA, 94025
CLMN Number of Claims: 123
ECL Exemplary Claim: 1
DRWN 3 Drawing Page(s)
LN.CNT 3233
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Novel compounds useful as chemotherapeutic and chemopreventive agents are provided. The compounds are analogs of indole-3-carbinol metabolites wherein the structures and substituents of the compounds are selected to enhance the compounds' overall efficacy, particularly with respect to therapeutic activity, oral bioavailability, long-term safety, patient tolerability, and therapeutic window. The compounds are useful not only in treatment of cancer but also in prevention of cancer. One preferred class of the novel compounds have the structure of formula (I)
##STR1##

wherein R.sup.1, R.sup.2, R.sup.3, R.sup.4, R.sup.5, R.sup.6, R.sup.7, R.sup.8, R.sup.9, R.sup.10, R.sup.11, and R.sup.12 are defined herein. Pharmaceutical compositions are provided as well, as are methods of synthesis and use.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
IT **36798-17-1P 112485-52-6P 249762-98-9P**
637774-61-9P 666752-22-3P 666752-29-0P
666752-30-3P 666752-34-7P 666752-35-8P
666752-38-1P 666752-41-6P
(preparation of indolo[2,3-b]carbazole analogs/metabolites as antitumor agents for chemotherapeutic and chemopreventive use)
RN 36798-17-1 USPATFULL
CN 1H-Indole, 2,2'-methylenebis[3-methyl- (9CI) (CA INDEX NAME)



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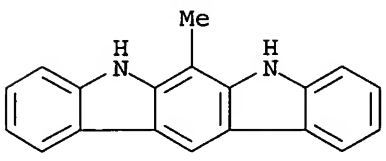

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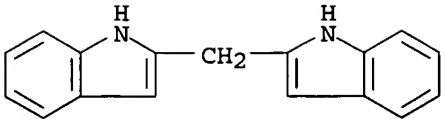

RN 637774-61-9 USPATFULL
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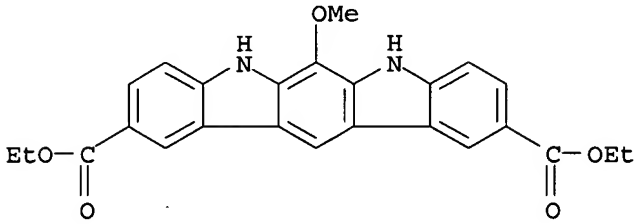

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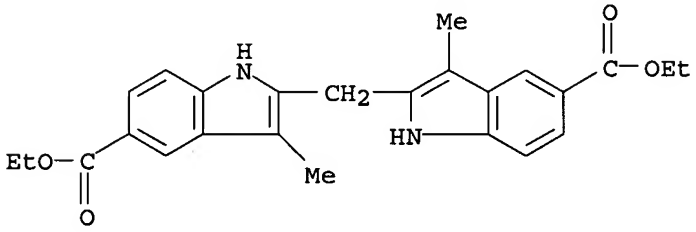

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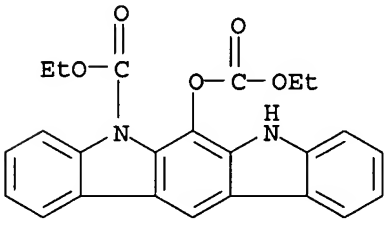
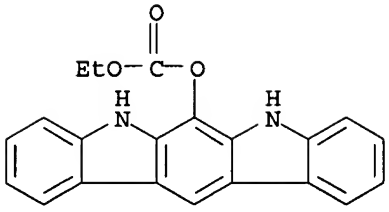
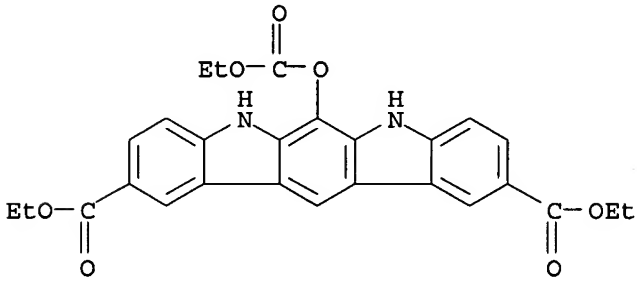


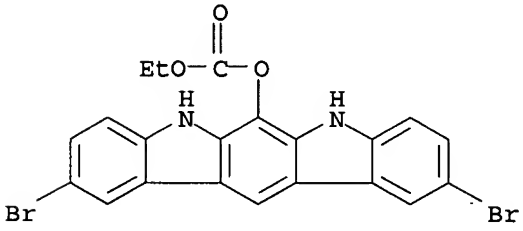
RN 666752-30-3 USPATFULL
CN Carbonic acid, 5,7-dihydroindolo[2,3-b]carbazol-6-yl ethyl ester (9CI) (CA INDEX NAME)



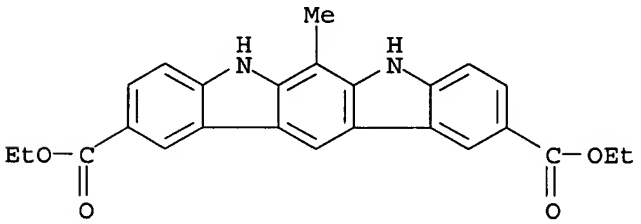
RN 666752-34-7 USPATFULL
CN Indolo[2,3-b]carbazole-2,10-dicarboxylic acid, 6-[(ethoxycarbonyl)oxy]-5,7-dihydro-, diethyl ester (9CI) (CA INDEX NAME)



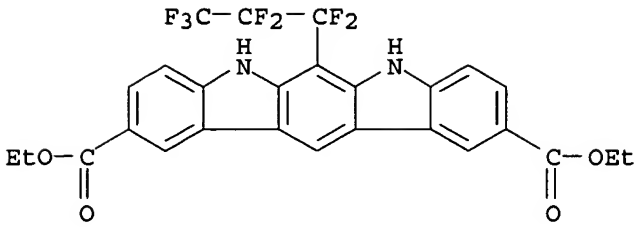
RN 666752-35-8 USPATFULL
CN Carbonic acid, 2,10-dibromo-5,7-dihydroindolo[2,3-b]carbazol-6-yl ethyl ester (9CI) (CA INDEX NAME)



RN 666752-38-1 USPATFULL
CN Indolo[2,3-b]carbazole-2,10-dicarboxylic acid, 5,7-dihydro-6-methyl-, diethyl ester (9CI) (CA INDEX NAME)

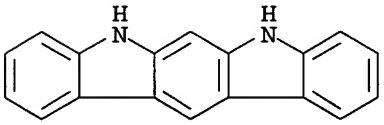


RN 666752-41-6 USPATFULL
CN Indolo[2,3-b]carbazole-2,10-dicarboxylic acid, 6-(heptafluoropropyl)-5,7-dihydro-, diethyl ester (9CI) (CA INDEX NAME)

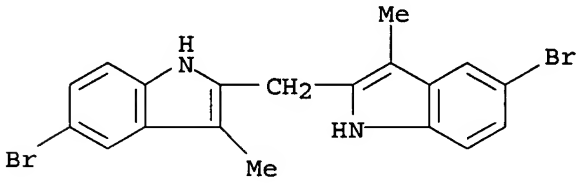


IT **111296-90-3P 666752-19-8P 666752-20-1P**
666752-21-2P 666752-31-4P 666752-32-5P
666752-33-6P 666752-36-9P 666752-37-0P
666752-39-2P 666752-40-5P 666752-42-7P
666752-43-8P 666752-44-9P
(preparation of indolo[2,3-b]carbazole analogs/metabolites as antitumor agents for chemotherapeutic and chemopreventive use)

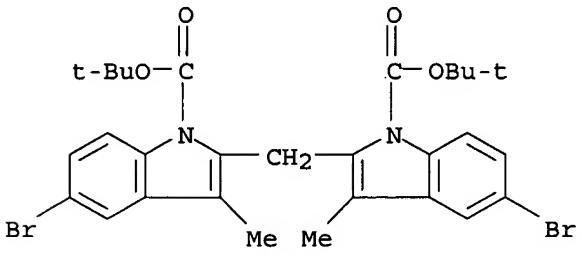
RN 111296-90-3 USPATFULL
CN Indolo[2,3-b]carbazole, 5,7-dihydro- (6CI, 9CI) (CA INDEX NAME)



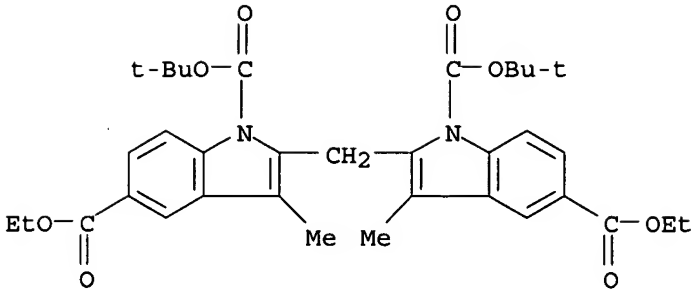
RN 666752-19-8 USPATFULL
CN 1H-Indole, 2,2'-methylenebis[5-bromo-3-methyl- (9CI) (CA INDEX NAME)



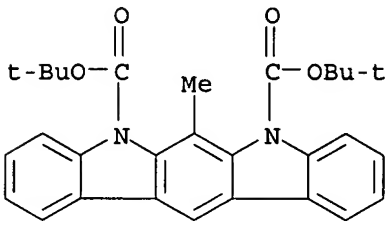
RN 666752-20-1 USPATFULL
CN 1H-Indole-1-carboxylic acid, 2,2'-methylenebis[5-bromo-3-methyl-, bis(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)



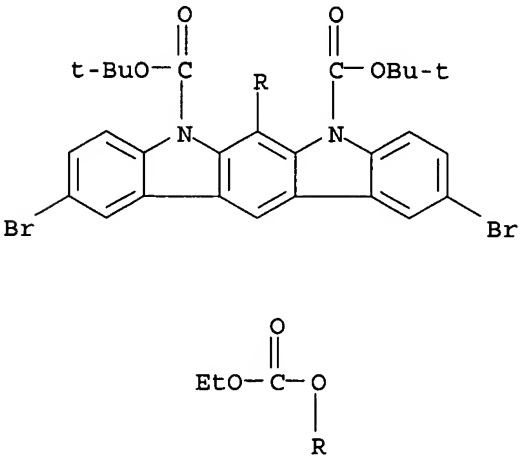
RN 666752-21-2 USPATFULL
CN 1H-Indole-1,5-dicarboxylic acid, 2,2'-methylenebis[3-methyl-, 1,1'-bis(1,1-dimethylethyl) 5,5'-diethyl ester (9CI) (CA INDEX NAME)



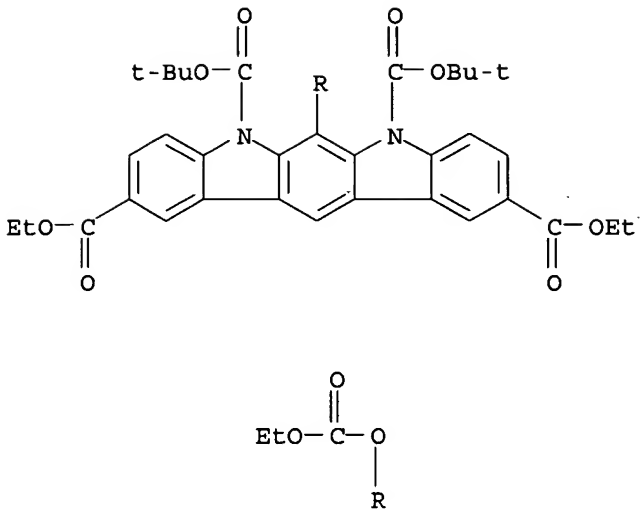
RN 666752-31-4 USPATFULL
CN Indolo[2,3-b]carbazole-5,7-dicarboxylic acid, 6-methyl-, bis(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)



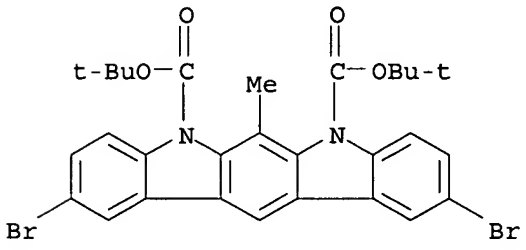
RN 666752-32-5 USPATFULL
CN Indolo[2,3-b]carbazole-5,7-dicarboxylic acid, 2,10-dibromo-6-[(ethoxycarbonyl)oxy]-, bis(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)



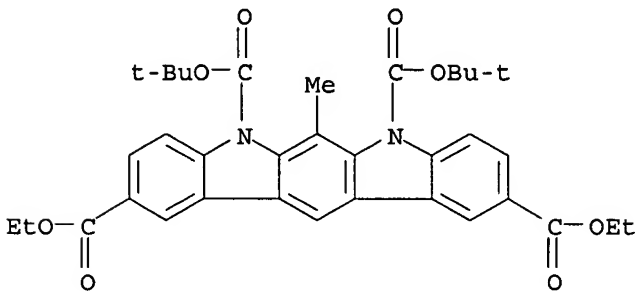
RN 666752-33-6 USPATFULL
CN Indolo[2,3-b]carbazole-2,5,7,10-tetracarboxylic acid, 6-[(ethoxycarbonyl)oxy]-, 5,7-bis(1,1-dimethylethyl) 2,10-diethyl ester (9CI) (CA INDEX NAME)



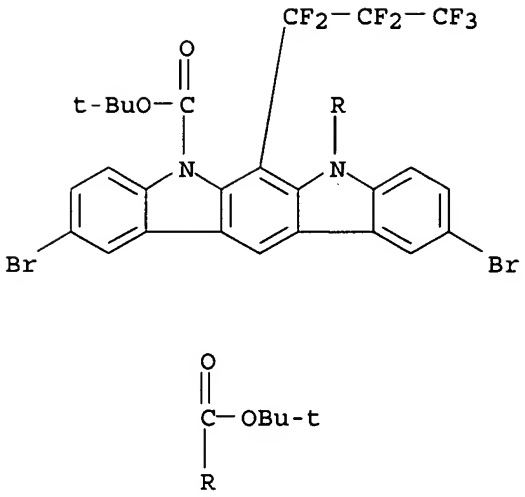
RN 666752-36-9 USPATFULL
CN Indolo[2,3-b]carbazole-5,7-dicarboxylic acid, 2,10-dibromo-6-methyl-, bis(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)



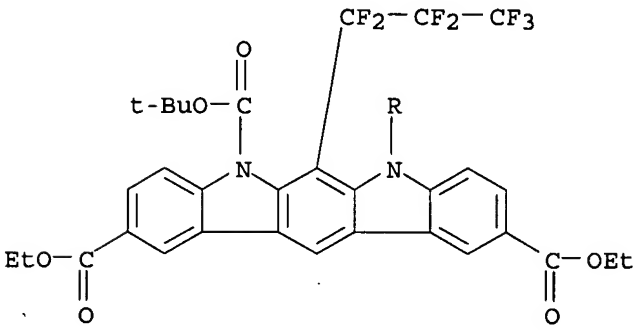
RN 666752-37-0 USPATFULL
CN Indolo[2,3-b]carbazole-2,5,7,10-tetracarboxylic acid, 6-methyl-, 5,7-bis(1,1-dimethylethyl) 2,10-diethyl ester (9CI) (CA INDEX NAME)

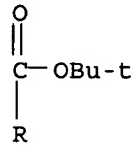


RN 666752-39-2 USPATFULL
CN Indolo[2,3-b]carbazole-5,7-dicarboxylic acid, 2,10-dibromo-6-(heptafluoropropyl)-, bis(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)

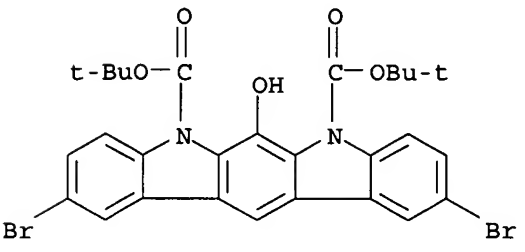


RN 666752-40-5 USPATFULL
CN Indolo[2,3-b]carbazole-2,5,7,10-tetracarboxylic acid, 6-(heptafluoropropyl)-, 5,7-bis(1,1-dimethylethyl) 2,10-diethyl ester (9CI) (CA INDEX NAME)

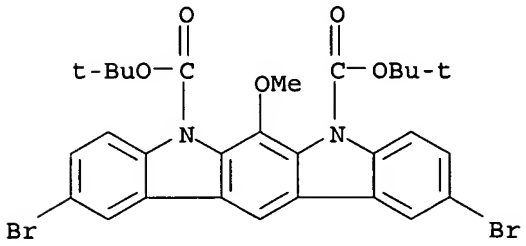




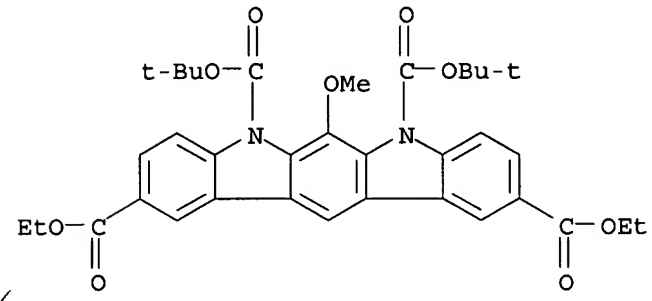
RN 666752-42-7 USPATFULL
CN Indolo[2,3-b]carbazole-5,7-dicarboxylic acid, 2,10-dibromo-6-hydroxy-, bis(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)



RN 666752-43-8 USPATFULL
CN Indolo[2,3-b]carbazole-5,7-dicarboxylic acid, 2,10-dibromo-6-methoxy-, bis(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)



RN 666752-44-9 USPATFULL
CN Indolo[2,3-b]carbazole-2,5,7,10-tetracarboxylic acid, 6-methoxy-, 5,7-bis(1,1-dimethylethyl) 2,10-diethyl ester (9CI) (CA INDEX NAME)



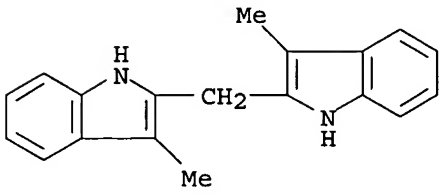
L61 ANSWER 2 OF 6 USPATFULL on STN
AN 2004:57958 USPATFULL
TI Analogs of indole-3-carbinol metabolites as chemotherapeutic and chemopreventive agents
IN Jong, Ling, Sunnyvale, CA, UNITED STATES
Chao, Wan-Ru, Sunnyvale, CA, UNITED STATES
PI US 2004043965 A1 20040304
US 6800655 B2 20041005
AI US 2002-224979 A1 20020820 (10)
DT Utility
FS APPLICATION
LREP REED & EBERLE LLP, 800 MENLO AVENUE, SUITE 210, MENLO PARK, CA, 94025
CLMN Number of Claims: 123
ECL Exemplary Claim: 1
DRWN 3 Drawing Page(s)
LN.CNT 3233
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Novel compounds useful as chemotherapeutic and chemopreventive agents are provided. The compounds are analogs of indole-3-carbinol metabolites wherein the structures and substituents of the compounds are selected to enhance the compounds' overall efficacy, particularly with respect to therapeutic activity, oral bioavailability, long-term safety, patient tolerability, and therapeutic window. The compounds are useful not only in treatment of cancer but also in prevention of cancer. One preferred class of the novel compounds have the structure of formula (I) ##STR1##

wherein R.sup.1, R.sup.2, R.sup.3, R.sup.4, R.sup.5, R.sup.6, R.sup.7, R.sup.8, R.sup.9, R.sup.10, R.sup.11, and R.sup.12 are defined herein. Pharmaceutical compositions are provided as well, as are methods of synthesis and use.

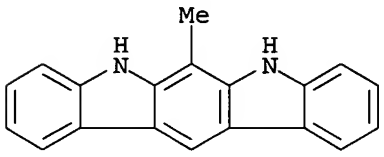
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT **36798-17-1P 112485-52-6P 249762-98-9P**
637774-61-9P 666752-22-3P 666752-29-0P
666752-30-3P 666752-34-7P 666752-35-8P
666752-38-1P 666752-41-6P
(preparation of indolo[2,3-b]carbazole analogs/metabolites as antitumor agents for chemotherapeutic and chemopreventive use)

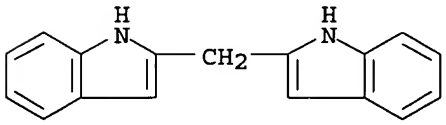
RN 36798-17-1 USPATFULL
CN 1H-Indole, 2,2'-methylenebis[3-methyl- (9CI) (CA INDEX NAME)



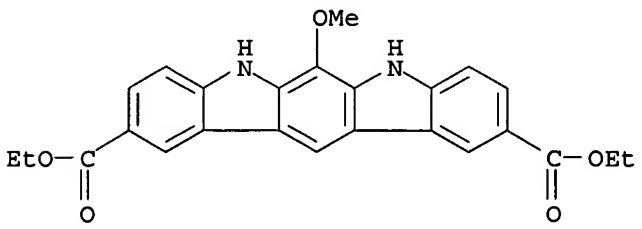
RN 112485-52-6 USPATFULL
CN Indolo[2,3-b]carbazole, 5,7-dihydro-6-methyl- (6CI, 9CI) (CA INDEX NAME)



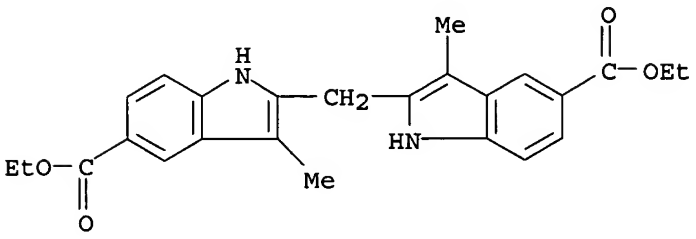
RN 249762-98-9 USPATFULL
CN 1H-Indole, 2,2'-methylenebis- (9CI) (CA INDEX NAME)



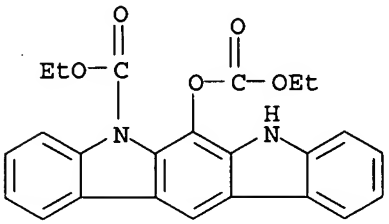
RN 637774-61-9 USPATFULL
CN Indolo[2,3-b]carbazole-2,10-dicarboxylic acid, 5,7-dihydro-6-methoxy-, diethyl ester (9CI) (CA INDEX NAME)



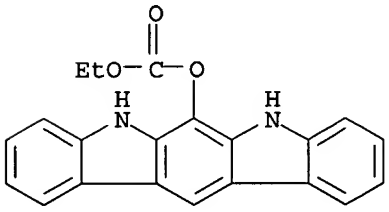
RN 666752-22-3 USPATFULL
CN 1H-Indole-5-carboxylic acid, 2,2'-methylenebis[3-methyl-, diethyl ester (9CI) (CA INDEX NAME)



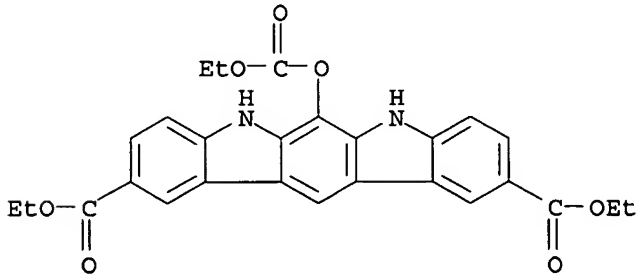
RN 666752-29-0 USPATFULL
CN Indolo[2,3-b]carbazole-5(7H)-carboxylic acid, 6-[(ethoxycarbonyl)oxy]-, ethyl ester (9CI) (CA INDEX NAME)



RN 666752-30-3 USPATFULL
CN Carbonic acid, 5,7-dihydroindolo[2,3-b]carbazol-6-yl ethyl ester (9CI) (CA INDEX NAME)

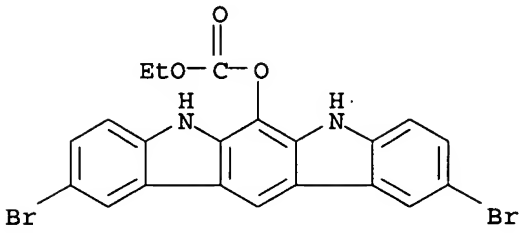


RN 666752-34-7 USPATFULL
CN Indolo[2,3-b]carbazole-2,10-dicarboxylic acid, 6-[(ethoxycarbonyl)oxy]-5,7-dihydro-, diethyl ester (9CI) (CA INDEX NAME)

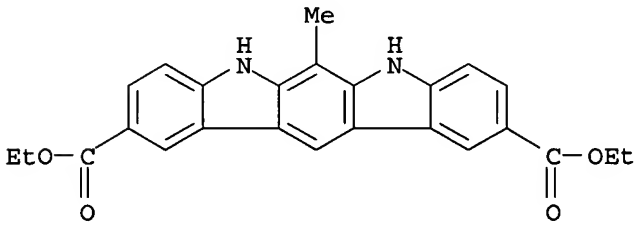


RN 666752-35-8 USPATFULL

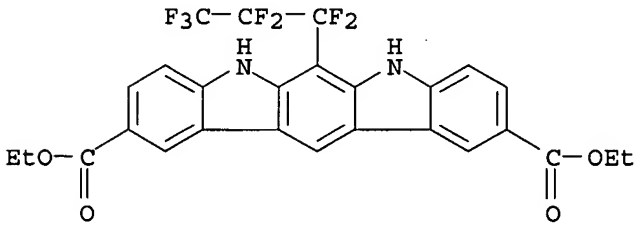
CN Carbonic acid, 2,10-dibromo-5,7-dihydroindolo[2,3-b]carbazol-6-yl ethyl ester (9CI) (CA INDEX NAME)



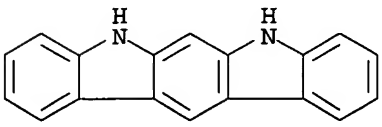
RN 666752-38-1 USPATFULL
CN Indolo[2,3-b]carbazole-2,10-dicarboxylic acid, 5,7-dihydro-6-methyl-, diethyl ester (9CI) (CA INDEX NAME)



RN 666752-41-6 USPATFULL
CN Indolo[2,3-b]carbazole-2,10-dicarboxylic acid, 6-(heptafluoropropyl)-5,7-dihydro-, diethyl ester (9CI) (CA INDEX NAME)

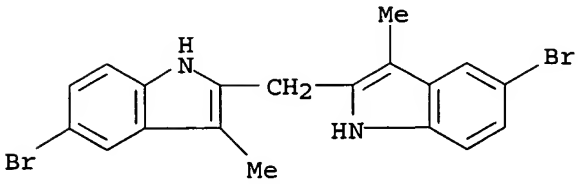


IT **111296-90-3P 666752-19-8P 666752-20-1P**
666752-21-2P 666752-31-4P 666752-32-5P
666752-33-6P 666752-36-9P 666752-37-0P
666752-39-2P 666752-40-5P 666752-42-7P
666752-43-8P 666752-44-9P
(preparation of indolo[2,3-b]carbazole analogs/metabolites as antitumor agents for chemotherapeutic and chemopreventive use)
RN 111296-90-3 USPATFULL
CN Indolo[2,3-b]carbazole, 5,7-dihydro- (6CI, 9CI) (CA INDEX NAME)

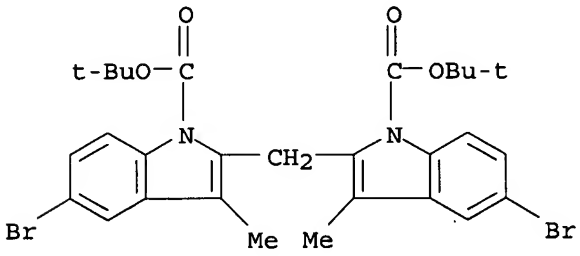


RN 666752-19-8 USPATFULL

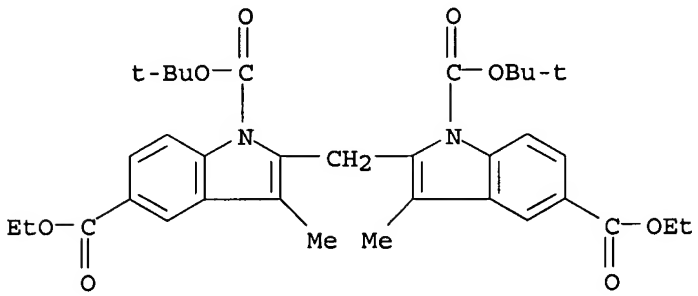
CN 1H-Indole, 2,2'-methylenebis[5-bromo-3-methyl- (9CI) (CA INDEX NAME)



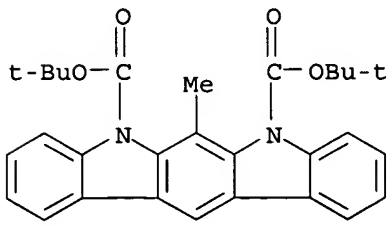
RN 666752-20-1 USPATFULL
CN 1H-Indole-1-carboxylic acid, 2,2'-methylenebis[5-bromo-3-methyl-, bis(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)



RN 666752-21-2 USPATFULL
CN 1H-Indole-1,5-dicarboxylic acid, 2,2'-methylenebis[3-methyl-, 1,1'-bis(1,1-dimethylethyl) 5,5'-diethyl ester (9CI) (CA INDEX NAME)

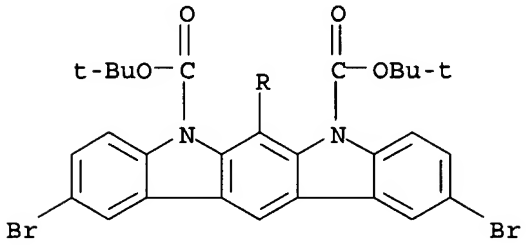


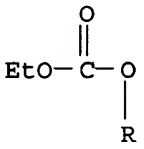
RN 666752-31-4 USPATFULL
CN Indolo[2,3-b]carbazole-5,7-dicarboxylic acid, 6-methyl-, bis(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)



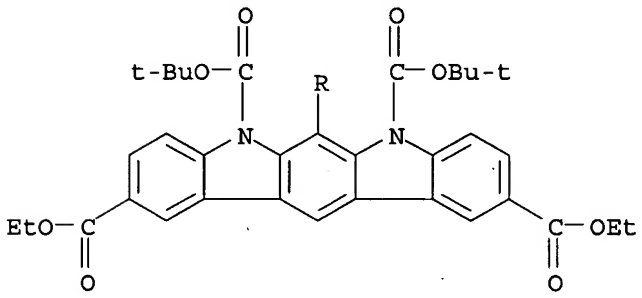
RN 666752-32-5 USPATFULL
CN Indolo[2,3-b]carbazole-5,7-dicarboxylic acid, 2,10-dibromo-6-

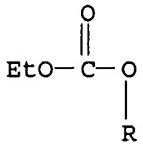
[(ethoxycarbonyl)oxy]-, bis(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)



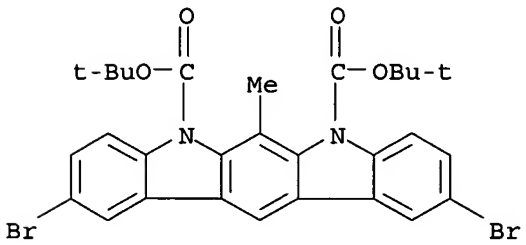


RN 666752-33-6 USPATFULL
CN Indolo[2,3-b]carbazole-2,5,7,10-tetracarboxylic acid, 6-[(ethoxycarbonyl)oxy]-, 5,7-bis(1,1-dimethylethyl) 2,10-diethyl ester (9CI) (CA INDEX NAME)

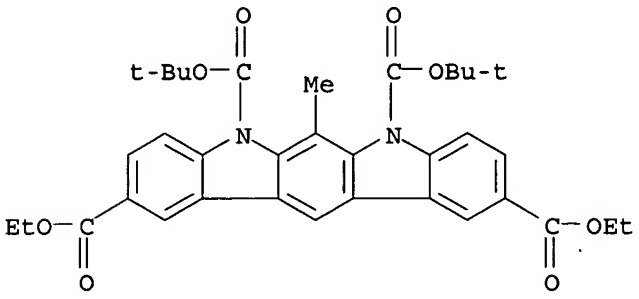




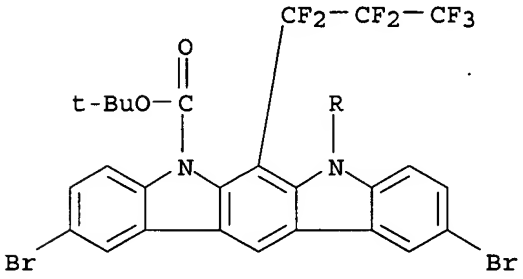
RN 666752-36-9 USPATFULL
CN Indolo[2,3-b]carbazole-5,7-dicarboxylic acid, 2,10-dibromo-6-methyl-, bis(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)

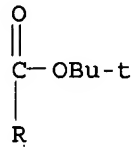


RN 666752-37-0 USPATFULL
CN Indolo[2,3-b]carbazole-2,5,7,10-tetracarboxylic acid, 6-methyl-, 5,7-bis(1,1-dimethylethyl) 2,10-diethyl ester (9CI) (CA INDEX NAME)

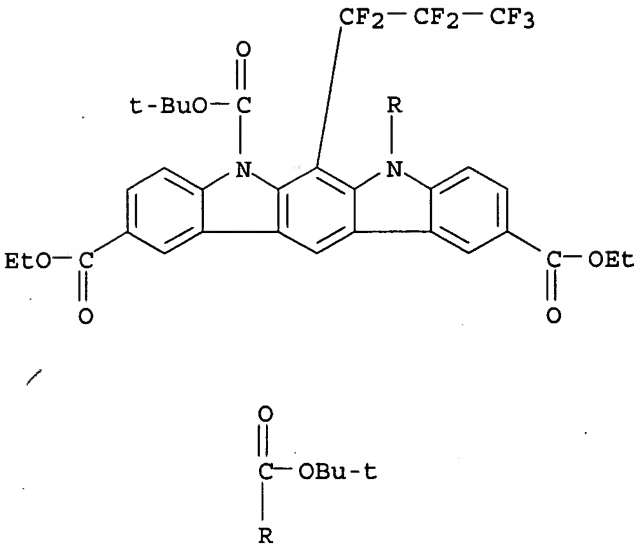


RN 666752-39-2 USPATFULL
CN Indolo[2,3-b]carbazole-5,7-dicarboxylic acid, 2,10-dibromo-6-(heptafluoropropyl)-, bis(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)

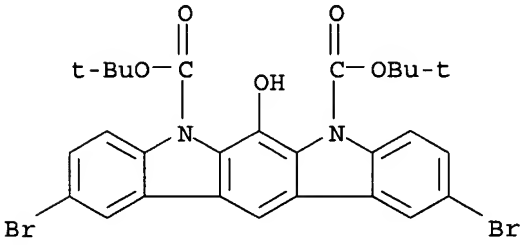




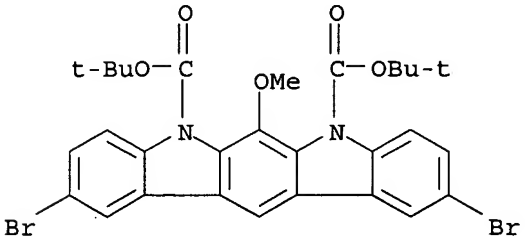
RN 666752-40-5 USPATFULL
CN Indolo[2,3-b]carbazole-2,5,7,10-tetracarboxylic acid, 6-(heptafluoropropyl)-, 5,7-bis(1,1-dimethylethyl) 2,10-diethyl ester (9CI) (CA INDEX NAME)



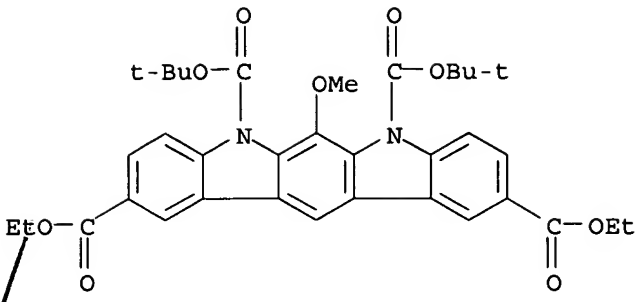
RN 666752-42-7 USPATFULL
CN Indolo[2,3-b]carbazole-5,7-dicarboxylic acid, 2,10-dibromo-6-hydroxy-, bis(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)



RN 666752-43-8 USPATFULL
CN Indolo[2,3-b]carbazole-5,7-dicarboxylic acid, 2,10-dibromo-6-methoxy-, bis(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)



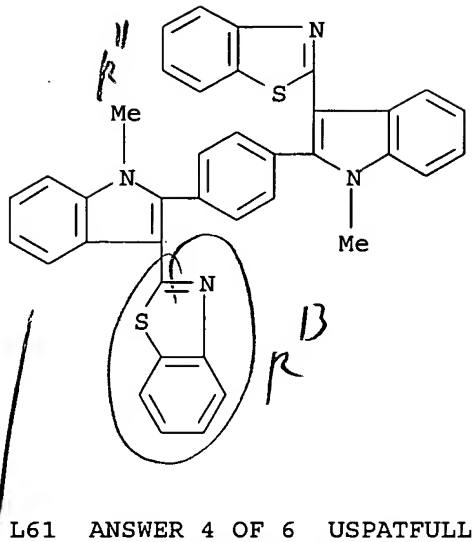
RN 666752-44-9 USPATFULL
CN Indolo[2,3-b]carbazole-2,5,7,10-tetracarboxylic acid, 6-methoxy-, 5,7-bis(1,1-dimethylethyl) 2,10-diethyl ester (9CI) (CA INDEX NAME)



L61 ANSWER 3 OF 6 USPATFULL on STN
AN 2004:18601 USPATFULL
TI Organic electroluminescence element
IN Lin, Tung-Shen, Tainan, TAIWAN, PROVINCE OF CHINA
PA LIGHTRONIK TECHNOLOGY INC., Tainan, TAIWAN, PROVINCE OF CHINA (non-U.S. corporation)
PI US 2004013903 A1 20040122
US 6790539 B2 20040914
AI US 2002-197825 A1 20020719 (10)
DT Utility
FS APPLICATION
LREP INTELLECTUAL PROPERTY SOLUTIONS, INCORPORATED, 5717 COLFAX AVENUE, ALEXANDRIA, VA, 22311
CLMN Number of Claims: 6
ECL Exemplary Claim: 1
DRWN 10 Drawing Page(s)
LN.CNT 350
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB An organic EL device which contains an anode, a cathode, and at least one organic thin-file layer including a light emitting layer which contains a compound represented by the following general formula (1):
##STR1##

wherein Ar.sub.1, Ar.sub.2 represent a substituted or unsubstituted aromatic hydrocarbon group, or a substituted or unsubstituted aromatic heterocyclic group; Y represents a single bound or methylene group; R1 to R4 represent each independently a hygrogen, a halogen, a cyano group, a substituted amino group, a substituted alkoxy group, a substituted or unsubstituted alkyl group, a substituted or unsubstituted aromatic hydrocarbon group, or a substituted or unsubstituted aromatic heterocyclic group; any two of R1 to R4 may form a ring. R5 represents a substituted or unsubstituted alkyl group, a substituted or unsubstituted aromatic hydrocarbon group, or a substituted or unsubstituted aromatic heterocyclic group.

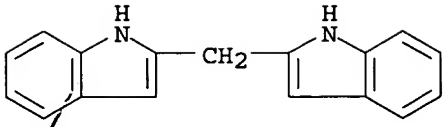
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
IT **649728-50-7P**
(blue-emitting organic electroluminescent devices based on indole derivs.)
RN 649728-50-7 USPATFULL
CN Benzothiazole, 2,2'-[1,4-phenylenebis(1-methyl-1H-indole-2,3-diyl)]bis- (9CI) (CA INDEX NAME)



L61 ANSWER 4 OF 6 USPATFULL on STN
AN 2003:11194 USPATFULL
TI Indole derivatives and their use for the treatment of malignant and other diseases based on pathological proliferation
IN Mahboobi, Siavosh, Regensburg, GERMANY, FEDERAL REPUBLIC OF
Kuhr, Sabine, Westerstede, GERMANY, FEDERAL REPUBLIC OF
Pongratz, Herwig, Regensburg, GERMANY, FEDERAL REPUBLIC OF
Popp, Alfred, Burghausen, GERMANY, FEDERAL REPUBLIC OF
Hufsky, Harald, Gaimersheim, GERMANY, FEDERAL REPUBLIC OF
Bohmer, Frank-D, Dorndorf, GERMANY, FEDERAL REPUBLIC OF
Teller, Steffen, Jena, GERMANY, FEDERAL REPUBLIC OF
Uecker, Andrea, Neuengonna, GERMANY, FEDERAL REPUBLIC OF
Beckers, Thomas, Frankfurt, GERMANY, FEDERAL REPUBLIC OF
PI US 2003008898 A1 20030109
US 6812243 B2 20041102
AI US 2002-137653 A1 20020503 (10)
RLI Division of Ser. No. US 1999-305115, filed on 4 May 1999, GRANTED, Pat. No. US 6407102
PRAI DE 1998-19819835 19980504
DE 1998-19838506 19980825
DT Utility
FS APPLICATION
LREP Pillsbury Winthrop LLP, Intellectual Property Group, 1600 Tysons Boulevard, McLean, VA, 22102
CLMN Number of Claims: 24
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 1461
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The invention relates to tyrosine kinase inhibitors of the bis-indolyl compound type of the general formula I: ##STR1##

pharmaceuticals containing them and their use for the treatment of malignant and other diseases based on pathological cell proliferation.

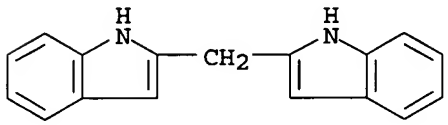
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
IT **249762-98-9P**
(preparation of bis(indolyl)methane derivs. as tyrosine kinase inhibitors)
RN 249762-98-9 USPATFULL
CN 1H-Indole, 2,2'-methylenebis- (9CI) (CA INDEX NAME)



L61 ANSWER 5 OF 6 USPATFULL on STN
AN 2002:144272 USPATFULL
TI Indole derivatives and their use for the treatment of malignant and other diseases based on pathological cell proliferation
IN Mahboobi, Siavosh, Regensburg, GERMANY, FEDERAL REPUBLIC OF
Kuhr, Sabine, Westerstede, GERMANY, FEDERAL REPUBLIC OF
Pongratz, Herwig, Regensburg, GERMANY, FEDERAL REPUBLIC OF
Popp, Alfred, Burghausen, GERMANY, FEDERAL REPUBLIC OF
Hufsky, Harald, Gaimersheim, GERMANY, FEDERAL REPUBLIC OF
Bohmer, Frank-D, Dorndorf, GERMANY, FEDERAL REPUBLIC OF
Teller, Steffen, Jena, GERMANY, FEDERAL REPUBLIC OF
Uecker, Andrea, Neuengonna, GERMANY, FEDERAL REPUBLIC OF
Beckers, Thomas, Frankfurt, GERMANY, FEDERAL REPUBLIC OF
PA Zentaris AG, Frankfurt/Main, GERMANY, FEDERAL REPUBLIC OF (non-U.S. corporation)
PI US 6407102 B1 20020618
AI US 1999-305115 19990504 (9)
PRAI DE 1998-19819835 19980504
DE 1998-19838506 19980825
DT Utility
FS GRANTED
EXNAM Primary Examiner: Solola, T. A.
LREP Pillsbury Winthrop LLP
CLMN Number of Claims: 11
ECL Exemplary Claim: 1
DRWN 0 Drawing Figure(s); 0 Drawing Page(s)
LN.CNT 1396
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The invention relates to tyrosine kinase inhibitors of the bis-indolyl compound type of the general formula I: ##STR1##

pharmaceuticals containing them and their use for the treatment of malignant and other diseases based on pathological cell proliferation.

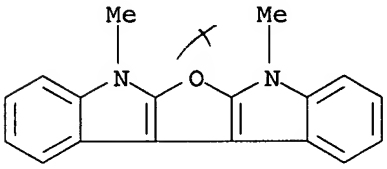
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
IT **249762-98-9P**
(preparation of bis(indolyl)methane derivs. as tyrosine kinase inhibitors)
RN 249762-98-9 USPATFULL
CN 1H-Indole, 2,2'-methylenebis- (9CI) (CA INDEX NAME)



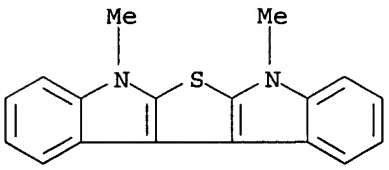
L61 ANSWER 6 OF 6 USPATFULL on STN
AN 2001:29066 USPATFULL
TI Near infrared-absorbing electrochromic compounds and devices comprising same
IN Thieste, Dave, Byron Center, MI, United States

Byker, Harlan J., Holland, MI, United States
Baumann, Kelvin, Holland, MI, United States
Srinivasa, Ramanujan, Holland, MI, United States
PA Gentex Corporation, Zeeland, MI, United States (U.S. corporation)
PI US 6193912 B1 20010227
AI US 1998-34531 19980303 (9)
DT Utility
FS Granted
EXNAM Primary Examiner: Tucker, Philip
LREP Rees, Brian J.Factor and Partners, LLC
CLMN Number of Claims: 39
ECL Exemplary Claim: 1
DRWN 7 Drawing Figure(s); 6 Drawing Page(s)
LN.CNT 1372
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Electrochromic compounds capable of reversibly attenuating the transmittance of the near infrared portion of the electromagnetic spectrum are provided. These compounds exhibit an energy difference between the singly occupied molecular orbital (SOMO) energy and the highest doubly occupied molecular orbital (HDOMO) energy (E.sub.SOMO -E.sub.HDOMO) of less than about 3.6 eV. In addition, these compounds have a transition moment of the configuration made up of the HDOMO and SOMO that is "long axis polarized".

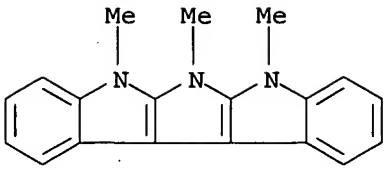
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
IT **241154-47-2 241154-48-3 241154-49-4**
(near IR-absorbing electrochromic compds. and devices employing them)
RN 241154-47-2 USPATFULL
CN Furo[2,3-b:5,4-b']diindole, 5,7-dihydro-5,7-dimethyl- (9CI) (CA INDEX NAME)



RN 241154-48-3 USPATFULL
CN Thieno[2,3-b:5,4-b']diindole, 5,7-dihydro-5,7-dimethyl- (9CI) (CA INDEX NAME)



RN 241154-49-4 USPATFULL
CN 5H-Pyrrolo[2,3-b:5,4-b']diindole, 6,7-dihydro-5,6,7-trimethyl- (9CI) (CA INDEX NAME)

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FILE COVERS 1907 - 24 Feb 2005  VOL 142 ISS 9
FILE LAST UPDATED: 23 Feb 2005  (20050223/ED)

 This file contains CAS Registry Numbers for easy and accurate
 substance identification.

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L59  ANSWER 1 OF 28  HCAPLUS  COPYRIGHT 2005 ACS on STN
AN   2004:182522  HCAPLUS
DN   140:235602
ED   Entered STN:  05 Mar 2004
TI   Preparation of indolo[2,3-b]carbazole analogs as
     chemotherapeutic and chemopreventive agents
IN   Jong, Ling; Chao, Wan-Ru
PA   SRI International, USA
SO   U.S. Pat. Appl. Publ., 42 pp.
     CODEN: USXXCO
DT   Patent
LA   English
IC   ICM  A61K031-541
     ICS  A61K031-675; A61K031-5377; A61K031-496; A61K031-454; A61K031-407;
          C07D487-02
NCL  514080000; 514410000; 548414000; 548418000; 544060000; 544142000;
     544372000; 546199000
CC   27-11 (Heterocyclic Compounds (One Hetero Atom))
     Section cross-reference(s): 1, 63
FAN.CNT 1
     PATENT NO.          KIND   DATE        APPLICATION NO.         DATE
     ---------------     ----   --------    --------------------    --------
PI   US 2004043965       A1     20040304    US 2002-224979          20020820 <--
     US 6800655          B2     20041005
     WO 2004018475       A2     20040304    WO 2003-US25772         20030815 <--
     WO 2004018475       A3     20040401
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RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

US 2004157906 A1 20040812 US 2004-772036 20040203 <--
PRAI US 2002-224979 A 20020820 <--

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
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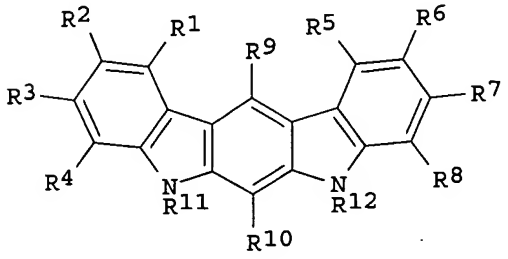
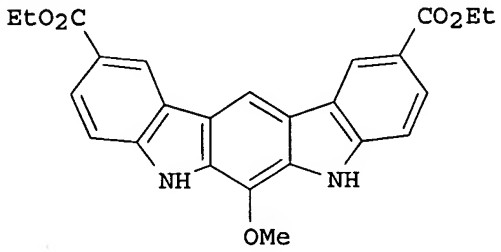
	ICS	A61K031-675; A61K031-5377; A61K031-496; A61K031-454; A61K031-407; C07D487-02
	NCL	514080000; 514410000; 548414000; 548418000; 544060000; 544142000; 544372000; 546199000
US 2004043965	ECLA	C07D209/08; C07D209/42; C07D487/04+209A+209A <--
US 2004157906	ECLA	C07D209/08; C07D209/42; C07D487/04+209A+209A <--

OS MARPAT 140:235602

GI



I



II

AB Title compds., I [wherein R1, R2, R3, R4, R5, R6, R7, R8, R9, R10 = independently H, alkyl, alkenyl, alkynyl, aryl, alkoxy, arylcarbamoyl, etc.; R11, R12 = independently H, alkoxycarbonyl, (un)substituted alkyl; with provisos; and pharmaceutically acceptable carriers thereof] and analogs of indole-3-carbinol metabolites (3 addnl. Markush structures), were prepared as chemotherapeutic and chemopreventive agents. For example, reaction of 3,3'-methylenebis[5-bromo-1H-indole] with Et chloroformate (92%), followed by methylation (91%) with MeI, substitution with Et chloroformate again (93%) and BOC-deprotection (97%), gave final product II. II was tested for growth inhibition, estrogenic and antiestrogenic activity in breast cancer lines, such as MCF-7, MDA-MB-231 and a tamoxifen-resistant strain of MCF-7. II also showed growth inhibitory activity on ovarian cancer cell lines with 5.1 μM (IC50) values for NIH-OVCAR-3 and 4.0 μM (IC50) for SKOV-3. Thus, title compds. and their pharmaceutical compns. are useful as chemotherapeutic and chemopreventive agents for the treatment and prevention of cancers, such

as breast and ovarian cancer.
ST **indolocarbazole** prepn antitumor estrogenic antiestrogenic; **indole** carbinol prepn antitumor
IT Multidrug resistance
(cancer; preparation of **indolo**[2,3-b]**carbazole** analogs/metabolites as antitumor agents for chemotherapeutic and chemopreventive use)
IT Drug delivery systems
(capsules; preparation of **indolo**[2,3-b]**carbazole** analogs/metabolites as antitumor agents for chemotherapeutic and chemopreventive use)
IT Drug delivery systems
(carriers; preparation of **indolo**[2,3-b]**carbazole** analogs/metabolites as antitumor agents for chemotherapeutic and chemopreventive use)
IT Uterus, neoplasm
(cervix; preparation of **indolo**[2,3-b]**carbazole** analogs/metabolites as antitumor agents for chemotherapeutic and chemopreventive use)
IT Intestine, neoplasm
(colon; preparation of **indolo**[2,3-b]**carbazole** analogs/metabolites as antitumor agents for chemotherapeutic and chemopreventive use)
IT Uterus, neoplasm
(endometrium; preparation of **indolo**[2,3-b]**carbazole** analogs/metabolites as antitumor agents for chemotherapeutic and chemopreventive use)
IT Neoplasm
(metastasis; preparation of **indolo**[2,3-b]**carbazole** analogs/metabolites as antitumor agents for chemotherapeutic and chemopreventive use)
IT Drug delivery systems
(oral; preparation of **indolo**[2,3-b]**carbazole** analogs/metabolites as antitumor agents for chemotherapeutic and chemopreventive use)
IT Antitumor agents
Antiviral agents
Human
Human papillomavirus
Liver, neoplasm
Lung, neoplasm
Mammary gland, neoplasm
Ovary, neoplasm
Pancreas, neoplasm
Prostate gland, neoplasm
(preparation of **indolo**[2,3-b]**carbazole** analogs/metabolites as antitumor agents for chemotherapeutic and chemopreventive use)
IT Estrogens
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of **indolo**[2,3-b]**carbazole** analogs/metabolites as antitumor agents for the treatment of estrogen-related diseases)
IT Drug delivery systems
(tablets; preparation of **indolo**[2,3-b]**carbazole** analogs/metabolites as antitumor agents for chemotherapeutic and chemopreventive use)
IT Infection
(viral, retroviral; preparation of **indolo**[2,3-b]**carbazole** analogs/metabolites as antitumor agents for chemotherapeutic and chemopreventive use)

IT Infection
(viral; preparation of **indolo**[2,3-b]**carbazole** analogs/metabolites as antitumor agents for chemotherapeutic and chemopreventive use)

IT 666752-11-0P 666752-15-4P
RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(preparation of **indolo**[2,3-b]**carbazole** analogs/metabolites as antitumor agents for chemotherapeutic and chemopreventive use)

IT **36798-17-1P 112485-52-6P** 114648-66-7P
249762-98-9P 424838-57-3P **637774-61-9P** 666752-03-0P
666752-04-1P 666752-05-2P 666752-08-5P 666752-12-1P 666752-13-2P
666752-16-5P 666752-17-6P **666752-22-3P** 666752-27-8P
666752-29-0P 666752-30-3P 666752-34-7P
666752-35-8P 666752-38-1P 666752-41-6P
666752-45-0P 666752-49-4P
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of **indolo**[2,3-b]**carbazole** analogs/metabolites as antitumor agents for chemotherapeutic and chemopreventive use)

IT 79-44-7, Dimethylcarbamyl chloride 83-34-1 108-24-7, Acetic acid anhydride 120-72-9, 1H-**Indole**, reactions 375-22-4, Heptafluorobutyric acid 541-41-3, Ethyl chloroformate 700-06-1, 1H-**Indole**-3-methanol 877-03-2 3770-50-1 5416-80-8 10075-50-0 32996-16-0
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of **indolo**[2,3-b]**carbazole** analogs/metabolites as antitumor agents for chemotherapeutic and chemopreventive use)

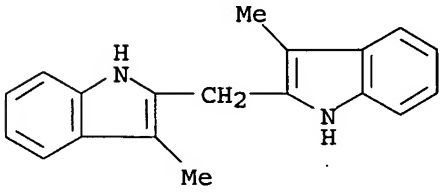
IT 1968-05-4P 5030-96-6P 6967-71-1P 10075-48-6P 17826-09-4P
18450-27-6P 24621-70-3P, 1H-**Indole**-2-methanol 26304-51-8P
40015-10-9P 70070-22-3P 92557-51-2P **111296-90-3P**
666752-02-9P 666752-06-3P 666752-07-4P 666752-09-6P 666752-10-9P
666752-14-3P 666752-18-7P **666752-19-8P 666752-20-1P**
666752-21-2P 666752-23-4P 666752-24-5P 666752-25-6P
666752-26-7P 666752-28-9P **666752-31-4P 666752-32-5P**
666752-33-6P 666752-36-9P 666752-37-0P
666752-39-2P 666752-40-5P 666752-42-7P
666752-43-8P 666752-44-9P 666752-46-1P 666752-47-2P
666752-48-3P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of **indolo**[2,3-b]**carbazole** analogs/metabolites as antitumor agents for chemotherapeutic and chemopreventive use)

IT 4111-54-0, Lithium diisopropylamide 38227-87-1, Lithium 2,2,6,6-tetramethylpiperidide
RL: RGT (Reagent); RACT (Reactant or reagent)
(preparation of **indolo**[2,3-b]**carbazole** analogs/metabolites as antitumor agents for chemotherapeutic and chemopreventive use)

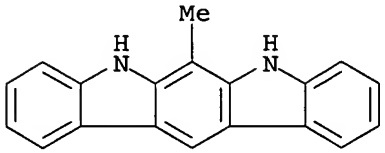
IT **36798-17-1P 112485-52-6P 249762-98-9P**
637774-61-9P 666752-22-3P 666752-29-0P
666752-30-3P 666752-34-7P 666752-35-8P
666752-38-1P 666752-41-6P
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of **indolo**[2,3-b]**carbazole**

analogs/metabolites as antitumor agents for chemotherapeutic and chemopreventive use)

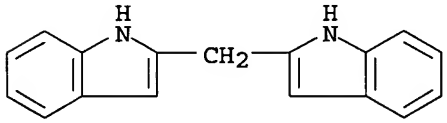
RN 36798-17-1 HCAPLUS
CN 1H-Indole, 2,2'-methylenebis[3-methyl- (9CI) (CA INDEX NAME)



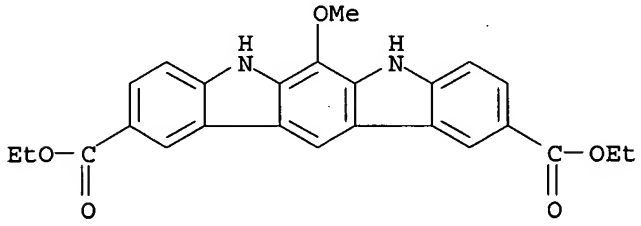
RN 112485-52-6 HCAPLUS
CN Indolo[2,3-b]carbazole, 5,7-dihydro-6-methyl- (6CI, 9CI) (CA INDEX NAME)



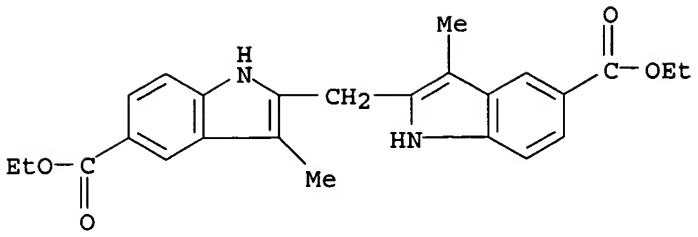
RN 249762-98-9 HCAPLUS
CN 1H-Indole, 2,2'-methylenebis- (9CI) (CA INDEX NAME)



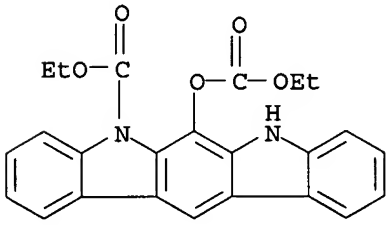
RN 637774-61-9 HCAPLUS
CN Indolo[2,3-b]carbazole-2,10-dicarboxylic acid, 5,7-dihydro-6-methoxy-, diethyl ester (9CI) (CA INDEX NAME)



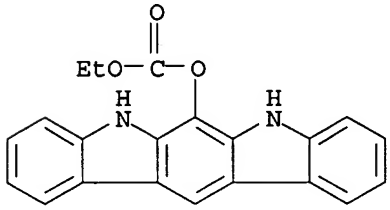
RN 666752-22-3 HCAPLUS
CN 1H-Indole-5-carboxylic acid, 2,2'-methylenebis[3-methyl-, diethyl ester (9CI) (CA INDEX NAME)



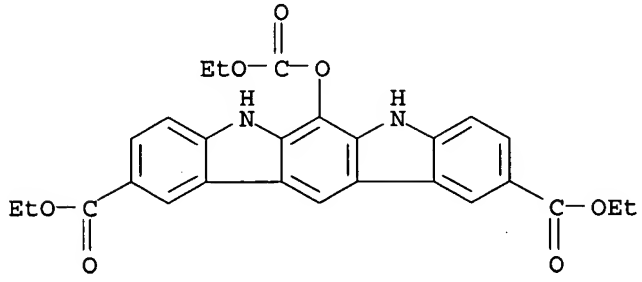
RN 666752-29-0 HCAPLUS
CN Indolo[2,3-b]carbazole-5(7H)-carboxylic acid, 6-[(ethoxycarbonyl)oxy]-, ethyl ester (9CI) (CA INDEX NAME)



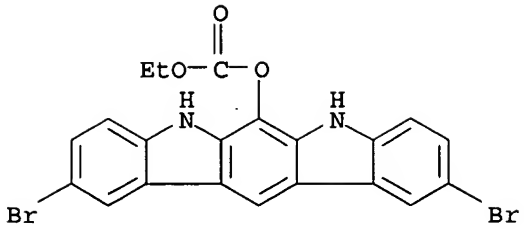
RN 666752-30-3 HCAPLUS
CN Carbonic acid, 5,7-dihydroindolo[2,3-b]carbazol-6-yl ethyl ester (9CI) (CA INDEX NAME)



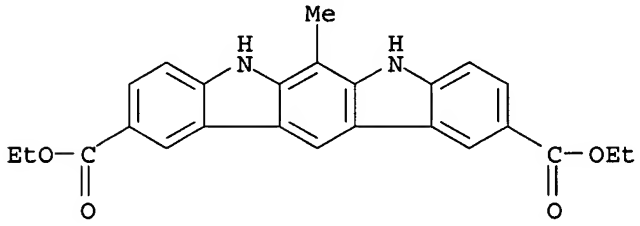
RN 666752-34-7 HCAPLUS
CN Indolo[2,3-b]carbazole-2,10-dicarboxylic acid, 6-[(ethoxycarbonyl)oxy]-5,7-dihydro-, diethyl ester (9CI) (CA INDEX NAME)



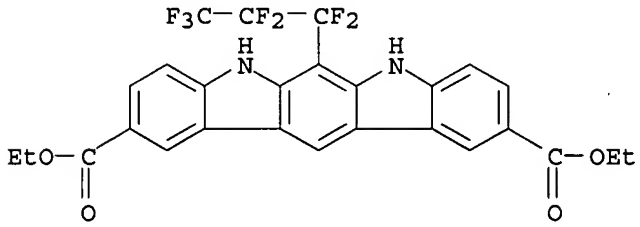
RN 666752-35-8 HCAPLUS
CN Carbonic acid, 2,10-dibromo-5,7-dihydroindolo[2,3-b]carbazol-6-yl ethyl ester (9CI) (CA INDEX NAME)



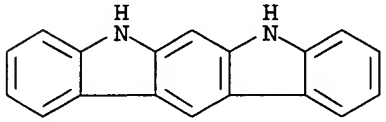
RN 666752-38-1 HCAPLUS
CN Indolo[2,3-b]carbazole-2,10-dicarboxylic acid, 5,7-dihydro-6-methyl-, diethyl ester (9CI) (CA INDEX NAME)



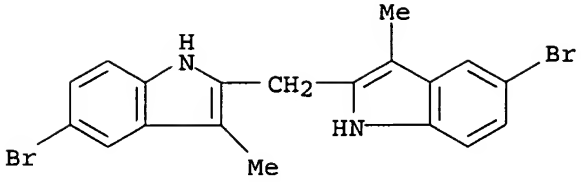
RN 666752-41-6 HCAPLUS
CN Indolo[2,3-b]carbazole-2,10-dicarboxylic acid, 6-(heptafluoropropyl)-5,7-dihydro-, diethyl ester (9CI) (CA INDEX NAME)



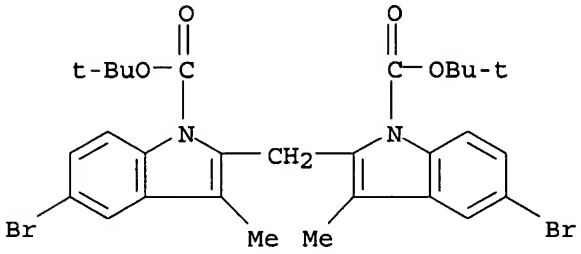
IT **111296-90-3P 666752-19-8P 666752-20-1P**
666752-21-2P 666752-31-4P 666752-32-5P
666752-33-6P 666752-36-9P 666752-37-0P
666752-39-2P 666752-40-5P 666752-42-7P
666752-43-8P 666752-44-9P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of **indolo**[2,3-b]**carbazole** analogs/metabolites as antitumor agents for chemotherapeutic and chemopreventive use)
RN 111296-90-3 HCAPLUS
CN Indolo[2,3-b]carbazole, 5,7-dihydro- (6CI, 9CI) (CA INDEX NAME)



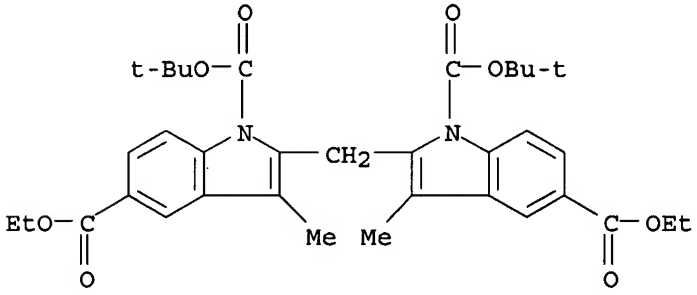
RN 666752-19-8 HCAPLUS
CN 1H-Indole, 2,2'-methylenebis[5-bromo-3-methyl- (9CI) (CA INDEX NAME)



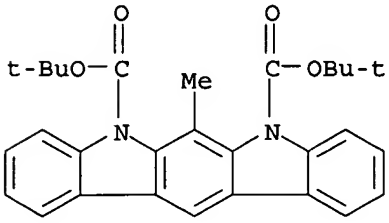
RN 666752-20-1 HCAPLUS
CN 1H-Indole-1-carboxylic acid, 2,2'-methylenebis[5-bromo-3-methyl-, bis(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)



RN 666752-21-2 HCAPLUS
CN 1H-Indole-1,5-dicarboxylic acid, 2,2'-methylenebis[3-methyl-, 1,1'-bis(1,1-dimethylethyl) 5,5'-diethyl ester (9CI) (CA INDEX NAME)

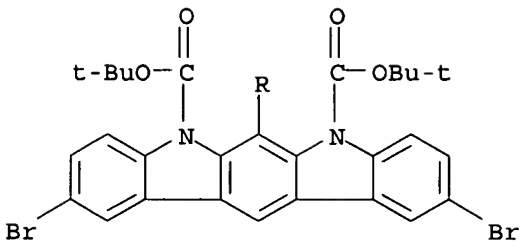


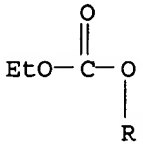
RN 666752-31-4 HCAPLUS
CN Indolo[2,3-b]carbazole-5,7-dicarboxylic acid, 6-methyl-, bis(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)



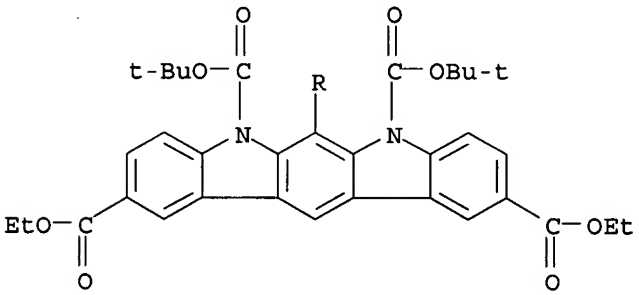
RN 666752-32-5 HCAPLUS
CN Indolo[2,3-b]carbazole-5,7-dicarboxylic acid, 2,10-dibromo-6-[(ethoxycarbonyl)oxy]-, bis(1,1-dimethylethyl) ester (9CI) (CA INDEX

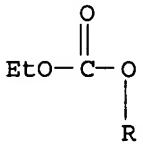
NAME)



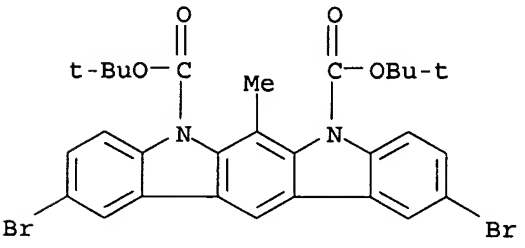


RN 666752-33-6 HCAPLUS
CN Indolo[2,3-b]carbazole-2,5,7,10-tetracarboxylic acid, 6-[(ethoxycarbonyl)oxy]-, 5,7-bis(1,1-dimethylethyl) 2,10-diethyl ester (9CI) (CA INDEX NAME)

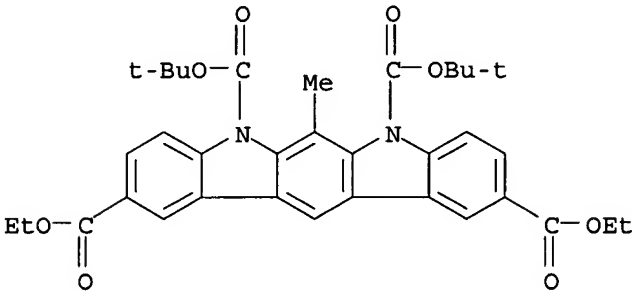




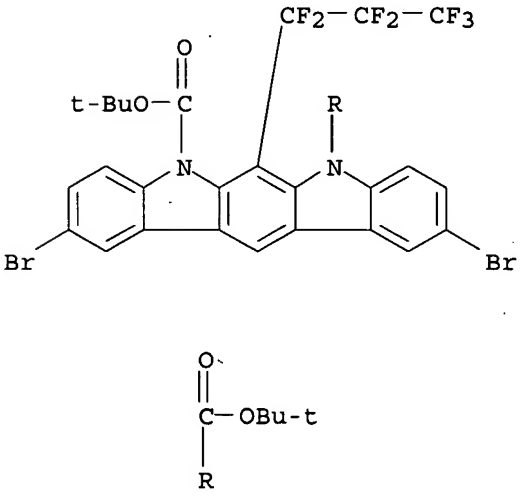
RN 666752-36-9 HCAPLUS
CN Indolo[2,3-b]carbazole-5,7-dicarboxylic acid, 2,10-dibromo-6-methyl-, bis(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)



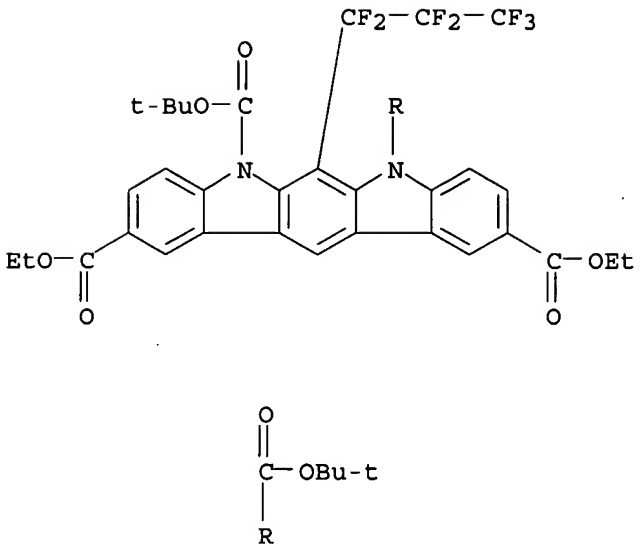
RN 666752-37-0 HCAPLUS
CN Indolo[2,3-b]carbazole-2,5,7,10-tetracarboxylic acid, 6-methyl-, 5,7-bis(1,1-dimethylethyl) 2,10-diethyl ester (9CI) (CA INDEX NAME)



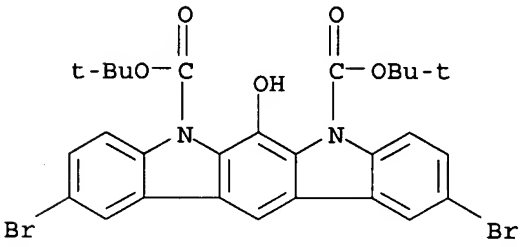
RN 666752-39-2 HCAPLUS
CN Indolo[2,3-b]carbazole-5,7-dicarboxylic acid, 2,10-dibromo-6-(heptafluoropropyl)-, bis(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)



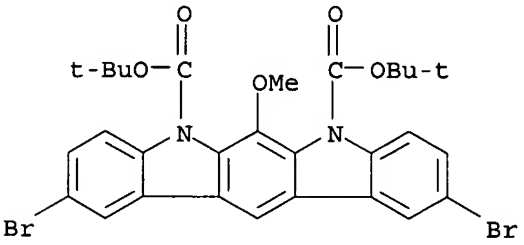
RN 666752-40-5 HCAPLUS
CN Indolo[2,3-b]carbazole-2,5,7,10-tetracarboxylic acid, 6-(heptafluoropropyl)-, 5,7-bis(1,1-dimethylethyl) 2,10-diethyl ester (9CI) (CA INDEX NAME)



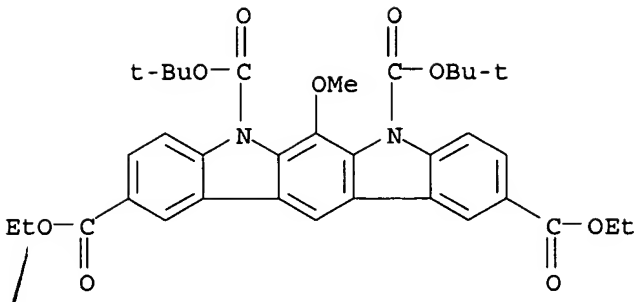
RN 666752-42-7 HCAPLUS
CN Indolo[2,3-b]carbazole-5,7-dicarboxylic acid, 2,10-dibromo-6-hydroxy-, bis(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)



RN 666752-43-8 HCAPLUS
CN Indolo[2,3-b]carbazole-5,7-dicarboxylic acid, 2,10-dibromo-6-methoxy-, bis(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)



RN 666752-44-9 HCAPLUS
CN Indolo[2,3-b]carbazole-2,5,7,10-tetracarboxylic acid, 6-methoxy-, 5,7-bis(1,1-dimethylethyl) 2,10-diethyl ester (9CI) (CA INDEX NAME)



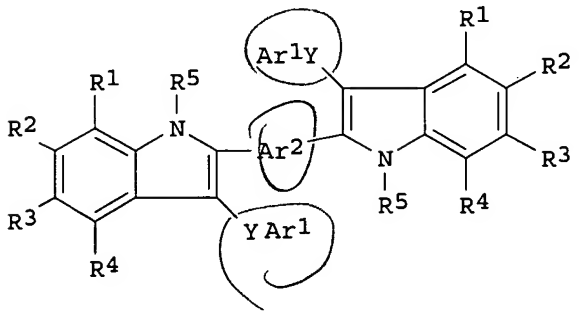
L59 ANSWER 2 OF 28 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 2004:59621 HCAPLUS
DN 140:136161
ED Entered STN: 23 Jan 2004
TI Blue-emitting organic electroluminescent devices based on indole derivatives
IN Lin, Tung-shen
PA Lightronik Technology Inc., Taiwan
SO U.S. Pat. Appl. Publ., 26 pp.
CODEN: USXXCO
DT Patent
LA English
IC ICM H05B033-12
NCL 428690000; 313504000; 313506000; 428917000
CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 22, 76
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 2004013903	A1	20040122	US 2002-197825	20020719 <--
US 6790539	B2	20040914		
PRAI US 2002-197825		20020719 <--		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 2004013903	ICM	H05B033-12
	NCL	428690000; 313504000; 313506000; 428917000
US 2004013903	ECLA	C09K011/06; H01L051/30H8; H05B033/14 <--

OS MARPAT 140:136161
GI



I

AB Organic electroluminescent devices are described which comprise an anode; a cathode; and ≥1 organic thin film layers including a light emitting

layer adjacent to the anode and the cathode, where ≥1 of the organic thin film layers contains a compound represented by formula (I) where Ar1 and Ar2 represent a substituted or unsubstituted aromatic hydrocarbon group, or a substituted or unsubstituted aromatic heterocyclic group; Y represents a single bound or methylene group; R1-4 represent independently a hydrogen, a halogen, a cyano group, a substituted amino group, a substituted alkoxy group, a substituted or unsubstituted alkyl group, a substituted or unsubstituted aromatic hydrocarbon group, or a substituted or unsubstituted aromatic heterocyclic group; any 2 of R1 to R4 may form a ring; and R5 represents a substituted or unsubstituted alkyl group, a substituted or unsubstituted aromatic hydrocarbon group, or a substituted or unsubstituted aromatic heterocyclic group.

ST blue org electroluminescent device indole deriv OLED

IT Electroluminescent devices
(blue-emitting; blue-emitting organic electroluminescent devices based on indole derivs.)

IT **649728-50-7P** 649728-51-8P 649728-52-9P 649728-53-0P
RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PRP (Properties); PYP (Physical process); SPN (Synthetic preparation); PREP (Preparation); PROC (Process); USES (Uses)
(blue-emitting organic electroluminescent devices based on indole derivs.)

IT 1662-01-7 2085-33-8, Alq3
RL: DEV (Device component use); PRP (Properties); USES (Uses)
(electron-transporting layer; blue-emitting organic electroluminescent devices based on indole derivs.)

IT 123847-85-8, NPB
RL: DEV (Device component use); PRP (Properties); USES (Uses)
(hole-transporting layer; blue-emitting organic electroluminescent devices based on indole derivs.)

RE.CNT 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD

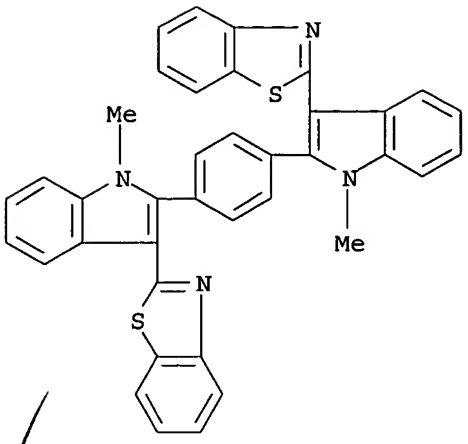
RE

(1) Adler; US 3935031 A 1976 HCAPLUS
(2) Anon; JP 20-01118683 A 2001 HCAPLUS
(3) Anon; JP 20-01291590 A 2001 HCAPLUS
(4) Conley; US 20030180573 A1 2003
(5) Kawamura; US 6074734 A 2000 HCAPLUS
(6) Lin; US 20030165712 A1 2003 HCAPLUS
(7) Mori; US 5281489 A 1994 HCAPLUS
(8) Rule; US 4127412 A 1978 HCAPLUS
(9) Tang; US 4356429 A 1982 HCAPLUS
(10) Tang; US 4769292 A 1988 HCAPLUS
(11) Tang, C; Appl. Phys. Lett 1987, V51, P913 HCAPLUS
(12) Tang, C; J. Appl. Phys 1989, P3610 HCAPLUS
(13) Tokailin; US 6093864 A 2000 HCAPLUS

IT **649728-50-7P**
RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PRP (Properties); PYP (Physical process); SPN (Synthetic preparation); PREP (Preparation); PROC (Process); USES (Uses)
(blue-emitting organic electroluminescent devices based on indole derivs.)

RN 649728-50-7 HCAPLUS

CN Benzothiazole, 2,2'-[1,4-phenylenebis(1-methyl-1H-indole-2,3-diyl)]bis- (9CI) (CA INDEX NAME)



L59 ANSWER 3 OF 28 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 2003:246684 HCAPLUS
DN 139:133484
ED Entered STN: 31 Mar 2003
TI Alkylation of 6-(3-indolyl)indolo[2,3-b]carbazole
AU Yudina, L. N.; Lazhko, E. I.; Korolev, A. M.; Preobrazhenskaya, M. N.
CS Scientific-Research Institute of New Antibiotics, Russian Academy of Medical Sciences, Moscow, 119867, Russia
SO Chemistry of Heterocyclic Compounds (New York, NY, United States)(Translation of Khimiya Geterotsiklicheskikh Soedinenii) (**2002**), 38(10), 1200-1204
CODEN: CHCCAL; ISSN: 0009-3122
PB Kluwer Academic/Consultants Bureau
DT Journal
LA English
CC 28-2 (Heterocyclic Compounds (More Than One Hetero Atom))
OS CASREACT 139:133484
AB The methylation and allylation of 6-(3-indolyl)indolo[2,3-b]carbazole were studied, and its tri-Me and mono-, di-, and triallyl derivs. were obtained.
ST indolyl indolocarbazole methylation; allylation indolyl indolocarbazole; allyl indolyl indolocarbazole prepn; methyl indolyl indolocarbazole prepn
IT Alkylation
(alkylation of 6-(3-indolyl)indolo[2,3-b]carbazole)
IT Heterocyclic compounds
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(nitrogen, aromatic; alkylation of 6-(3-indolyl)indolo[2,3-b]carbazole)
IT 106-95-6, Allyl bromide, reactions 258329-25-8
RL: RCT (Reactant); RACT (Reactant or reagent)
(alkylation of 6-(3-indolyl)indolo[2,3-b]carbazole)
IT 567626-01-1P 567626-02-2P 567626-03-3P 567626-04-4P
567626-05-5P
RL: SPN (Synthetic preparation); PREP (Preparation)
(alkylation of 6-(3-indolyl)indolo[2,3-b]carbazole)
RE.CNT 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
(1) Chrisholm, J; J Org Chem 1995, V60, P6672
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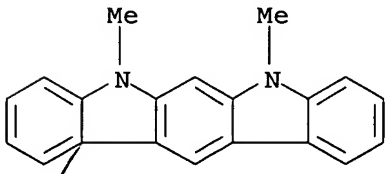
IT **567626-05-5P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(alkylation of 6-(3-indolyl)indolo[2,3-b]carbazole)
RN 567626-05-5 HCAPLUS
CN Indolo[2,3-b]carbazole, 5,7-dihydro-5,7-dimethyl- (9CI) (CA INDEX NAME)



L59 ANSWER 4 OF 28 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 2000:436777 HCAPLUS
DN 133:278132
ED Entered STN: 29 Jun 2000
TI Supercritical fluid chromatography as basis for identification and quantitative determination of indol-3-ylmethyl oligomers and ascorbigens
AU Buskov, S.; Olsen, C. E.; Sorensen, H.; Sorensen, S.
CS Chemistry Department, Royal Veterinary and Agricultural University, Frederiksberg, DK-1871, Den.
SO Journal of Biochemical and Biophysical Methods (**2000**), 43(1-3), 175-195
CODEN: JBBMDG; ISSN: 0165-022X
PB Elsevier Science Ireland Ltd.
DT Journal
LA English
CC 9-3 (Biochemical Methods)
Section cross-reference(s): 11, 63
AB Indol-3-ylmethylglucosinolate (glucobrassicin) occurs in most plants of the Brassicaceae family together with hydroxy and methoxy derivs. of glucobrassicin. These compds. and products produced therefrom have been the subject of considerable research interest due to their potential anticarcinogenic effects, and thereby a need for techniques to work with the individual compds. A method using normal-phase supercrit. fluid chromatog. (SFC) with methanol as modifier has been developed for determination and quantification of the various indol-3-ylmethyl derivs. including ascorbigens formed from the glucobrassicin degradation product, indol-3-ylmethanol, under acidic conditions (pH 2-6) with and without the presence of ascorbic acid. The SFC method had detection limits in the 10-100-pmol range. In the absence of ascorbic acid a range of oligomers were formed, whereas the presence of ascorbic acid favored the formation of ascorbigen and products thereof. Quant. important indol-3-ylmethyl oligomers consisting of up to five indol rings have been purified with preparative SFC and identified from MS and 1D and 2D NMR expts. with complete assignment of chemical shifts to all of the atoms. Investigation of the autolysis products of white cabbage showed that ascorbigens were the quant. dominating degradation products of indol-3-ylmethylglucosinolates.
ST supercrit fluid chromatog indol ascorbigen oligomer Brassicaceae
IT Cruciferae (Brassicaceae)
Supercritical fluid chromatography
pH
(supercrit. fluid chromatog. as basis for identification and quant. determination of indol-3-ylmethyl oligomers and ascorbigens)
IT Oligomers
RL: ANT (Analyte); BOC (Biological occurrence); BSU (Biological study,

unclassified); SPN (Synthetic preparation); ANST (Analytical study); BIOL (Biological study); OCCU (Occurrence); PREP (Preparation)
(supercrit. fluid chromatog. as basis for identification and quant. determination of indol-3-ylmethyl oligomers and ascorbigens)

IT 499-30-9, Gluconasturtiin 499-37-6, Glucoalyssin 4356-52-9, Indol-3-ylmethylglucosinolate 5187-84-8, Neoglucobrassicin 8075-98-7D, Ascorbigen, derivs. 19041-09-9, Gluconapin 19041-10-2, Glucobrassicanapin 21414-41-5, Glucoraphanin 83327-20-2, 4-Hydroxyglucobrassicin 83327-21-3, 4-Methoxyglucobrassicin 96888-15-2, 4-Methoxyascorbigen
RL: ANT (Analyte); BOC (Biological occurrence); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study); OCCU (Occurrence)
(supercrit. fluid chromatog. as basis for identification and quant. determination of indol-3-ylmethyl oligomers and ascorbigens)

IT **249762-98-9P**
RL: ANT (Analyte); BOC (Biological occurrence); BSU (Biological study, unclassified); SPN (Synthetic preparation); ANST (Analytical study); BIOL (Biological study); OCCU (Occurrence); PREP (Preparation)
(supercrit. fluid chromatog. as basis for identification and quant. determination of indol-3-ylmethyl oligomers and ascorbigens)

IT 50-81-7, Ascorbic acid, analysis 700-06-1, Indol-3-ylmethanol
RL: ANT (Analyte); RCT (Reactant); ANST (Analytical study); RACT (Reactant or reagent)
(supercrit. fluid chromatog. as basis for identification and quant. determination of indol-3-ylmethyl oligomers and ascorbigens)

IT 518-06-9P 137460-69-6P 137460-73-2P 138250-72-3P 299403-17-1P 299403-19-3P 299403-20-6P
RL: ANT (Analyte); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation)
(supercrit. fluid chromatog. as basis for identification and quant. determination of indol-3-ylmethyl oligomers and ascorbigens)

RE.CNT 43 THERE ARE 43 CITED REFERENCES AVAILABLE FOR THIS RECORD

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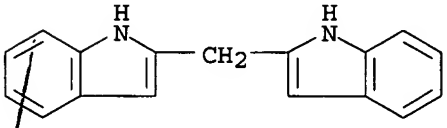
IT **249762-98-9P**
RL: ANT (Analyte); BOC (Biological occurrence); BSU (Biological study, unclassified); SPN (Synthetic preparation); ANST (Analytical study); BIOL (Biological study); OCCU (Occurrence); PREP (Preparation)
(supercrit. fluid chromatog. as basis for identification and quant. determination of indol-3-ylmethyl oligomers and ascorbigens)
RN 249762-98-9 HCAPLUS
CN 1H-Indole, 2,2'-methylenebis- (9CI) (CA INDEX NAME)



L59 ANSWER 5 OF 28 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 1999:723034 HCAPLUS
DN 131:336939
ED Entered STN: 12 Nov 1999
TI Indole derivatives and their use in the treatment of malignant and other diseases caused by pathological cell proliferation
IN Mahboobi, Siavosh; Kuhr, Sabine; Pongratz, Herwig; Popp, Alfred; Hufsky, Harald; Bohmer, Frank-d; Teller, Steffen; Uecker, Andrea; Beckers, Thomas
PA Asta Medica Aktiengesellschaft, Germany
SO PCT Int. Appl., 62 pp.
CODEN: PIXXD2
DT Patent
LA German
IC ICM C07D471-00
CC 27-11 (Heterocyclic Compounds (One Hetero Atom))
Section cross-reference(s): 1, 7
FAN.CNT 1

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WO 9957117	A3	20010412		

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     US 1999-305115       A3    19990504  <--
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                         C07D087/14+209A+209A+209A;
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                         C07D471/22+245D+221C+221C+209B+209B+209B+209B;
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GI
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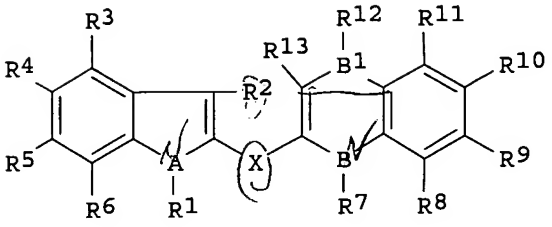

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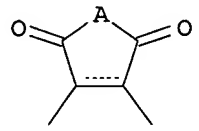

AB Indole derivs. I [A = N, O, S; B, B1 = C, N, O, S, bond; X = (un)substituted alkylene, Q; R1, R7, R12 = H, alkyl, aminoalkyl, PhSO2, alkylsilylmethoxymethyl, carbohydrate; R3-R6, R8-R11 = H, (un)substituted alkyl, alkoxy, acyloxy, NO2, halogen; R2R13 = bond, CO, Q; R2, R13 = H, QR14; R14 = halogen, substituted alkylamino] were prepared for use as tyrosine kinase inhibitors in treating malignant and other diseases caused by pathol. cell proliferation. Thus, 1-phenylsulfonylindole was added to 1-phenylsulfonyl-2-indolecarboxaldehyde to give bis(1-phenylsulfonylindol-2-yl)methanol which was oxidized to the ketone and desulfonylated to give bis(2-indolyl)methanone. This compound had an IC50 of 1 μM for inhibition of tyrosine phosphorylation.

ST diindolylmethane prepn tyrosine kinase inhibitor; indole deriv prepn tyrosine kinase inhibitor

IT 249762-76-3P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(preparation of bis(indolyl)methane derivs. as tyrosine kinase inhibitors)

IT 200706-56-5P 249762-41-2P 249762-42-3P 249762-47-8P 249762-62-7P 249762-64-9P 249762-67-2P 249762-72-9P 249762-74-1P 249762-75-2P 249762-78-5P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of bis(indolyl)methane derivs. as tyrosine kinase inhibitors)

IT 80449-02-1, Tyrosine kinase
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(preparation of bis(indolyl)methane derivs. as tyrosine kinase inhibitors)

IT 818-38-2, Diethyl glutarate 1122-10-7, Dibromomaleimide 40899-71-6, 1-Phenylsulfonylindole 80360-23-2, 1-Phenylsulfonylindole-2-carboxaldehyde 82185-43-1, N-Trimethylsilyl-o-toluidine 96668-28-9 153432-70-3
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of bis(indolyl)methane derivs. as tyrosine kinase inhibitors)

IT 41895-52-7P 249762-27-4P 249762-28-5P 249762-29-6P 249762-30-9P 249762-31-0P 249762-32-1P 249762-33-2P 249762-34-3P 249762-35-4P 249762-36-5P 249762-37-6P 249762-38-7P 249762-39-8P 249762-40-1P 249762-43-4P 249762-44-5P 249762-46-7P 249762-48-9P 249762-50-3P

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249763-41-5P 249765-09-1P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of bis(indolyl)methane derivs. as tyrosine kinase inhibitors)

IT 65610-73-3P **249762-98-9P**
RL: RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(preparation of bis(indolyl)methane derivs. as tyrosine kinase inhibitors)

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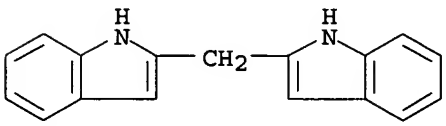
249764-19-0P
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of bis(indolyl)methane derivs. as tyrosine kinase inhibitors)

IT **249762-98-9P**
RL: RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(preparation of bis(indolyl)methane derivs. as tyrosine kinase inhibitors)

RN 249762-98-9 HCAPLUS
CN 1H-Indole, 2,2'-methylenebis- (9CI) (CA INDEX NAME)



L59 ANSWER 6 OF 28 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 1999:633953 HCAPLUS
DN 132:12434

ED Entered STN: 07 Oct 1999
TI Homoarcyriaflavin: Synthesis of Ring-Expanded Arcyriaflavin Analogues
AU Mahboobi, Siavosh; Burgemeister, Thomas; Dove, Stefan; Kuhr, Sabine; Popp, Alfred
CS Faculty of Chemistry and Pharmacy, University Regensburg, Regensburg, D-93040, Germany
SO Journal of Organic Chemistry (**1999**), 64(22), 8130-8137
CODEN: JOCEAH; ISSN: 0022-3263
PB American Chemical Society
DT Journal
LA English
CC 31-6 (Alkaloids)
Section cross-reference(s): 22, 75
AB The construction of the ring-expanded carbazole system, forming arcyriaflavin homologues, is efficiently accomplished by the reaction of 2,2'-bridged bis-indoles with 3,4-dibromo-2,5-dihydro-1H-2,5-pyrroledione derivs. under Grignard conditions. A ring size of up to nine members in the central ring is achievable. Substitutions either at the indole system or at the imide-N are also possible. The conformation of homoarcyriaflavins as a cross-link between the rigid arcyriaflavins and the flexible arcyriarubins was investigated by NMR, X-ray, and semiempiric quantum chemical calcn. methods.
ST homoarcyriaflavin prepn crystal structure; arcyriaflavin ring expanded conformation
IT Crystal structure
(of homoarcyriaflavin)
IT AM1 MO (molecular orbital)
Conformation
(synthesis of ring-expanded arcyriaflavin analogs)
IT 249763-11-9P
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(crystal structure; synthesis of ring-expanded arcyriaflavin analogs)
IT 123-25-1, Diethyl succinate 818-38-2 1122-10-7 3005-27-4
4584-46-7, 1-Chloro-2-(N,N-dimethylamino)ethane hydrochloride 40899-71-6
56995-12-1 80360-23-2 82185-43-1 102147-52-4 251454-22-5
RL: RCT (Reactant); RACT (Reactant or reagent)
(synthesis of ring-expanded arcyriaflavin analogs)
IT 144445-47-6P 200706-56-5P 249762-27-4P 249762-29-6P 249762-39-8P
249762-40-1P 249762-41-2P 249762-94-5P 249762-96-7P
249762-98-9P 249762-99-0P 249763-00-6P 249763-03-9P
249763-04-0P 249763-07-3P 249763-08-4P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(synthesis of ring-expanded arcyriaflavin analogs)
IT 249763-05-1P 249763-06-2P 249763-09-5P 249763-10-8P 249763-12-0P
249763-37-9P 251454-26-9P 251454-27-0P 251454-28-1P
RL: SPN (Synthetic preparation); PREP (Preparation)
(synthesis of ring-expanded arcyriaflavin analogs)
RE.CNT 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
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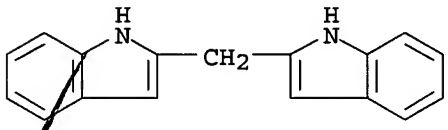
(33) Toullec, D; J Biol Chem 1991, V266, P15771 HCAPLUS
(34) Trinks, U; J Med Chem 1994, V37, P1015 HCAPLUS

IT **249762-98-9P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(synthesis of ring-expanded arcyriaflavin analogs)

RN 249762-98-9 HCAPLUS
CN 1H-Indole, 2,2'-methylenebis- (9CI) (CA INDEX NAME)



L59 ANSWER 7 OF 28 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 1999:576995 HCAPLUS
DN 131:207009
ED Entered STN: 14 Sep 1999
TI Near infrared-absorbing electrochromic compounds and devices comprising same
IN Thieste, Dave; Byker, Harlan J.; Baumann, Kelvin; Srinivasa, Ramanujan
PA Gentex Corp., USA
SO PCT Int. Appl., 58 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM C09K009-02
ICS G02F001-15
CC 74-9 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 28, 52, 72, 73

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9945081	A1	19990910	WO 1999-US4617	19990302 <--

W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM,

TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU,
TJ, TM
RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK,
ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG,
CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

US 6193912	B1	20010227	US 1998-34531	19980303	<--
CA 2322649	AA	19990910	CA 1999-2322649	19990302	<--
AU 9928897	A1	19990920	AU 1999-28897	19990302	<--
AU 754393	B2	20021114			
EP 1060224	A1	20001220	EP 1999-909765	19990302	<--
R: DE, FR, GB, IE					
PRAI US 1998-34531	A1	19980303	<--		
WO 1999-US4617	W	19990302	<--		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES	
WO 9945081	ICM	C09K009-02	
	ICS	G02F001-15	
WO 9945081	ECLA	C09K009/02; G02F001/15V	<--
US 6193912	ECLA	C09K009/02; G02F001/15V	<--

OS MARPAT 131:207009

AB Electrochromic media capable of reversibly attenuating the transmittance of the near IR portion of the electromagnetic spectrum are described which contain ≥1 anodic compound which exhibits in its oxidized form an energy difference between the singly occupied MO (SOMO) energy and the highest doubly occupied MO (HDOMO) energy of less than about 3.6 eV., and a redox potential greater than about 90 mV. Preferably, the compds. have a transition moment of the configuration made up of the HDOMO and SOMO that is long axis polarized. Compds. for use in the media are also described, as are electrochromic devices employing the media. Application as electrochromic windows capable of improving energy efficiency by controlling the admission of solar IR radiation is indicated.

ST near IR absorbing electrochromic compd; window near IR absorbing electrochromic

IT Windows
(electrochromic; near IR-absorbing electrochromic compds. and devices employing them)

IT Electrochromic devices
(near IR-absorbing electrochromic compds. and devices employing them)

IT Electrochromic devices
(windows; near IR-absorbing electrochromic compds. and devices employing them)

IT 13050-56-1 15546-75-5, 5,10-Dihydro-5,10-dimethylphenazine 16012-31-0 33131-88-3 57103-04-5 59996-00-8 173072-40-7 177180-45-9 241154-34-7 241154-36-9 241154-37-0 241154-38-1 241154-39-2 241154-40-5 241154-41-6 241154-42-7 241154-43-8 241154-44-9 241154-45-0 241154-46-1 **241154-47-2 241154-48-3 241154-49-4**
RL: DEV (Device component use); USES (Uses)
(near IR-absorbing electrochromic compds. and devices employing them)

IT 108-32-7, Propylene carbonate
RL: DEV (Device component use); NUU (Other use, unclassified); USES (Uses)
(near IR-absorbing electrochromic compds. and devices employing them)

IT 241154-31-4P 241154-32-5P 241154-33-6P 241154-35-8P
RL: DEV (Device component use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(near IR-absorbing electrochromic compds. and devices employing them)

IT 61-73-4, Methylene blue 74-88-4, reactions 258-72-0, Triphenodioxazine 302-01-2, Hydrazine, reactions 1310-58-3, Potassium hydroxide, reactions 2516-05-4, Methylene violet 7057-57-0, Meldola's Blue 7775-14-6, Sodium dithionite
RL: RCT (Reactant); RACT (Reactant or reagent)
(near IR-absorbing electrochromic compds. and devices employing them)

RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
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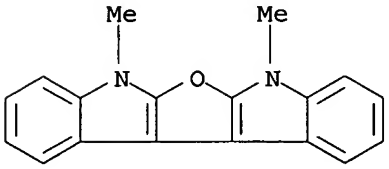
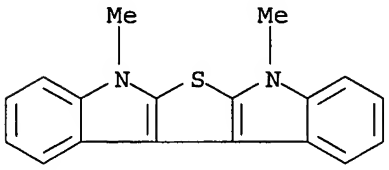
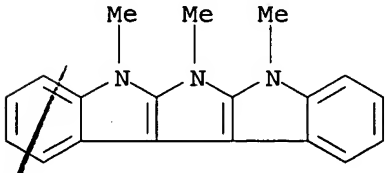
IT **241154-47-2 241154-48-3 241154-49-4**
RL: DEV (Device component use); USES (Uses)
(near IR-absorbing electrochromic compds. and devices employing them)
RN 241154-47-2 HCAPLUS
CN Furo[2,3-b:5,4-b']diindole, 5,7-dihydro-5,7-dimethyl- (9CI) (CA INDEX NAME)



RN 241154-48-3 HCAPLUS
CN Thieno[2,3-b:5,4-b']diindole, 5,7-dihydro-5,7-dimethyl- (9CI) (CA INDEX NAME)

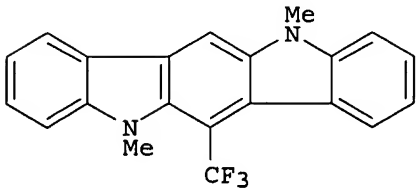


RN 241154-49-4 HCAPLUS
CN 5H-Pyrrolo[2,3-b:5,4-b']diindole, 6,7-dihydro-5,6,7-trimethyl- (9CI) (CA INDEX NAME)



L59 ANSWER 8 OF 28 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 1998:775042 HCAPLUS
DN 130:110177
ED Entered STN: 11 Dec 1998
TI A convenient synthesis of 5,11-dihydro-5,11-dimethyl-6-trifluoromethylindolo[3,2-b]carbazole
AU Biswas, K. M.; Mallik, Haimanti; Saha, Aparna
CS Department of Chemistry, University College of Science, Calcutta, 700 009, India
SO Indian Journal of Chemistry, Section B: Organic Chemistry Including Medicinal Chemistry (**1998**), 37B(9), 841-843
CODEN: IJSBDB; ISSN: 0376-4699

PB National Institute of Science Communication, CSIR
DT Journal
LA English
CC 28-2 (Heterocyclic Compounds (More Than One Hetero Atom))
OS CASREACT 130:110177
GI



I

AB On treatment with (F3CCO)2O both N,N'-dimethyl-3,3'-diindolylmethane and N-methylindole-3-methanol give the title indolocarbazole I along with three other products.
ST indolemethanol methyl cyclocondensation trifluoroacetic anhydride; diindolylmethane dimethyl cyclocondensation trifluoroacetic anhydride; indolocarbazole dihydrodimethyltrifluoromethyl prepn
IT Cyclocondensation reaction
(preparation of (trifluoromethyl)indolocarbazole derivative by cyclocondensation
of trifluoroacetic anhydride with dimethyldiindolylmethane or methylindolemethanol)
IT 318-54-7P
RL: SPN (Synthetic preparation); PREP (Preparation)
(acylation product in reaction of trifluoroacetic anhydride with dimethyldiindolylmethane or methylindolemethanol)
IT 407-25-0, Trifluoroacetic anhydride 6965-44-2 31896-75-0
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of (trifluoromethyl)indolocarbazole derivative by cyclocondensation
of trifluoroacetic anhydride with dimethyldiindolylmethane or methylindolemethanol)
IT 219701-20-9P 219701-21-0P **219701-22-1P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of (trifluoromethyl)indolocarbazole derivative by cyclocondensation
of trifluoroacetic anhydride with dimethyldiindolylmethane or methylindolemethanol)
RE.CNT 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
(1) Bancs, R; Organofluorine compounds and their applications 1979
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(8) Cipiciani, A; Tetrahedron 1976, V32, P2595 HCAPLUS
(9) Colmenares, L; Tetrahedron 1996, V52, P109 HCAPLUS
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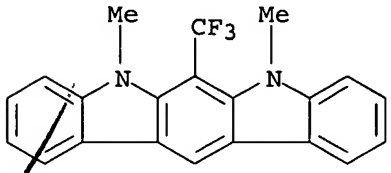
IT **219701-22-1P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of (trifluoromethyl)indolocarbazole derivative by cyclocondensation
of trifluoroacetic anhydride with dimethyldiindolylmethane or methylindolemethanol)
RN 219701-22-1 HCAPLUS
CN Indolo[2,3-b]carbazole, 5,7-dihydro-5,7-dimethyl-6-(trifluoromethyl)-(9CI) (CA INDEX NAME)



L59 ANSWER 9 OF 28 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 1998:348083 HCAPLUS
DN 129:95420
ED Entered STN: 10 Jun 1998
TI Transition metal complexes in organic synthesis. 44. Iron-mediated synthesis of indolo[2,3-b]carbazole
AU Knolker, Hans-Joachim; Reddy, Kethiri R.
CS Institut fur Organische Chemie, Universitat Karlsruhe, Karlsruhe, D-76131, Germany
SO Tetrahedron Letters (**1998**), 39(23), 4007-4008
CODEN: TELEAY; ISSN: 0040-4039
PB Elsevier Science Ltd.
DT Journal
LA English
CC 28-2 (Heterocyclic Compounds (More Than One Hetero Atom))
Section cross-reference(s): 29
AB A straightforward two-step synthesis of indolo[2,3-b]carbazole using a double iron-mediated arylamine cyclization as the key-step is described.
ST indolocarbazole prepn iron mediated
IT 108-45-2, 1,3-Benzenediamine, reactions 33678-01-2
RL: RCT (Reactant); RACT (Reactant or reagent)
(iron-mediated preparation of indolo[2,3-b]carbazole)
IT 209627-88-3P 209627-89-4P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(iron-mediated preparation of indolo[2,3-b]carbazole)
IT **111296-90-3P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(iron-mediated preparation of indolo[2,3-b]carbazole)
RE.CNT 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
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(2) Bergman, J; Pure Appl Chem 1990, V62, P1967 HCAPLUS
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(9) Kistenmacher, A; J Heterocycl Chem 1992, V29, P1237 HCAPLUS
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(11) Knolker, H; Chem Ber 1992, V125, P2783
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(14) Knolker, H; Organic Synthesis via Organometallics 1991, P119
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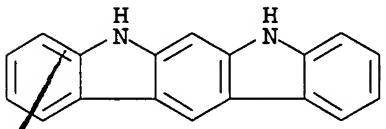
(19) Knolker, H; Tetrahedron Lett 1997, V38, P4051 HCAPLUS
(20) Knolker, H; Tetrahedron Lett 1998, V39, P2947 HCAPLUS
(21) Mann, F; J Chem Soc 1958, P1525 HCAPLUS
(22) Moody, C; Synlett 1994, P681 HCAPLUS
(23) Pindur, U; Chimia 1990, V44, P406 HCAPLUS
(24) Robinson, B; J Chem Soc 1963, P3097 HCAPLUS
(25) Weller, H; J Am Chem Soc 1983, V105, P6268 HCAPLUS

IT **111296-90-3P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(iron-mediated preparation of indolo[2,3-b]carbazole)
RN 111296-90-3 HCAPLUS
CN Indolo[2,3-b]carbazole, 5,7-dihydro- (6CI, 9CI) (CA INDEX NAME)



L59 ANSWER 10 OF 28 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 1997:663860 HCAPLUS
DN 127:356217
ED Entered STN: 18 Oct 1997
TI Electrochemical and peroxidase O2-mediated oxidation of indole-3-acetic acid at physiological pH
AU Hu, Tao; Dryhurst, Glenn
CS Department of Chemistry and Biochemistry, University of Oklahoma, Norman, OK, 73019, USA
SO Journal of Electroanalytical Chemistry (**1997**), 432(1-2), 7-18
CODEN: JECHES; ISSN: 0368-1874
PB Elsevier
DT Journal
LA English
CC 6-1 (General Biochemistry)
Section cross-reference(s): 7, 26
AB Indole-3-acetic acid (IAA) or an oxidative metabolite is believed to be a growth hormone in plants. IAA is also found in the mammalian central nervous system although its biol. roles, if any, are presently unknown. In this investigation the electrochem. driven and peroxidase/O2-mediated oxidation chemical of IAA at physiol. pH has been studied with the primary goal of identifying the major reaction products. Based upon the nature of these products it has been concluded that, at pH 7.4, the anion of IAA is initially oxidized (one-electron) to an acetoxy radical that in part undergoes a second one-electron oxidation/decarboxylation to a carbocation precursor of 3-hydroxymethyl-2-oxindole (1), indole-3-carbinol (13) and 3-methylene-2-oxindole (3). Indole-3-carbinol (13) can be further oxidized (2e, 1H+) to the cation of 3-hydroxymethylene indolenine, the precursor of indole-3-aldehyde (2), 3-hydroxy-2-oxidole (8) and 3,3-dihydroxy-2-oxindole (12). Direct decarboxylation of the initial acetoxy radical yields a carbon-centered radical that rapidly dimerizes to a compound that is further oxidized to 3,3'-(1,2-ethanediyl)bis-1H-indol-2-ol (9) and thence 5,7,12,13-tetrahydro-oxepino[2,3-b:7,6-b']diindole (10). A parallel oxidation pathway involves oxidation of IAA to the cation of 3-methyleneindolenine carboxylic acid, the precursor of 2-oxidole-3-acetic

acid (11). Particularly when relatively high concns. of IAA are electrochem. oxidized for long periods of time, many addnl. oligomeric and polymeric products are formed. The peroxidase/O2-mediated oxidation of IAA at pH 7.4 gives exactly the same products formed in the electrochem. reaction suggesting that, in a chemical sense, the enzymic reaction follows the same pathways as the electrochem. reaction.

ST indole acetate oxidn electrochem peroxidase

IT Oxidation
(biol.; comparison of electrochem. and peroxidase O2-mediated oxidation of indole-3-acetic acid at physiol. pH)

IT Electric potential
Oxidation, electrochemical
(comparison of electrochem. and peroxidase O2-mediated oxidation of indole-3-acetic acid at physiol. pH)

IT 9003-99-0, Peroxidase
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(comparison of electrochem. and peroxidase O2-mediated oxidation of indole-3-acetic acid at physiol. pH)

IT 7782-44-7, Oxygen, biological studies
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(comparison of electrochem. and peroxidase O2-mediated oxidation of indole-3-acetic acid at physiol. pH)

IT 87-51-4, Indole-3-acetic acid, biological studies
RL: BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent)
(comparison of electrochem. and peroxidase O2-mediated oxidation of indole-3-acetic acid at physiol. pH)

IT 61-71-2 487-89-8, Indole-3-aldehyde 700-06-1, Indole-3-carbinol 771-50-6, Indole-3-carboxylic acid 1861-29-6 2005-90-5 2971-31-5 68232-53-1 68232-54-2 68232-56-4 198485-76-6 **198485-77-7** 198485-78-8
RL: BSU (Biological study, unclassified); FMU (Formation, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative)
(comparison of electrochem. and peroxidase O2-mediated oxidation of indole-3-acetic acid at physiol. pH)

RE.CNT 55 THERE ARE 55 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

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(3) Artigas, F; Biochem Pharmacol 1983, V32, P3251 HCAPLUS
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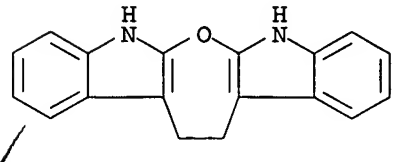
IT **198485-77-7**
RL: BSU (Biological study, unclassified); FMU (Formation, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative)
(comparison of electrochem. and peroxidase O2-mediated oxidation of indole-3-acetic acid at physiol. pH)

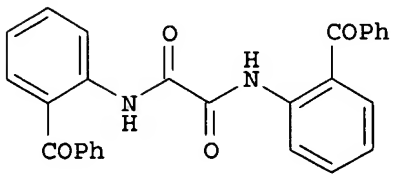
RN 198485-77-7 HCAPLUS

CN Oxepino[2,3-b:7,6-b']diindole, 5,7,12,13-tetrahydro- (9CI) (CA INDEX NAME)



L59 ANSWER 11 OF 28 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 1995:505286 HCAPLUS
DN 123:83146
ED Entered STN: 22 Apr 1995
TI Titanium-induced zipper reactions
AU Fuerstner, Alois; Ptock, Arne; Weintritt, Holger; Goddard, Richard; Krueger, Carl
CS Max-Planck-Inst. Kohlenforschung, Muelheim an der Ruhr, D-45470, Germany
SO Angewandte Chemie, International Edition in English (**1995**), 34(6), 678-81
CODEN: ACIEAY; ISSN: 0570-0833

PB VCH
DT Journal
LA English
CC 27-11 (Heterocyclic Compounds (One Hetero Atom))
Section cross-reference(s): 75
OS CASREACT 123:83146
GI



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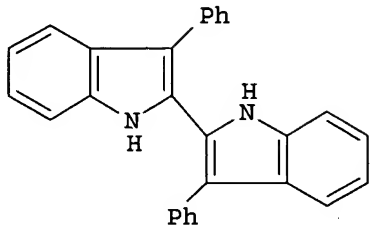


II

AB A one step titanium-induced zipper reaction results in an amazing and unprecedented chemo- and regioselectivity in the reductive cyclization of polycarbonyl compds. Thus, polycarbonyl compound I was treated with TiCl3 and zinc dust under argon to give 80% biindole derivative II.

ST titanium induced zipper reaction; reductive cyclization regiochem polycarbonyl compd; indole bi

IT Crystal structure
Ring closure and formation
(titanium-induced zipper reactions)

IT 164936-85-0P
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(crystal structure; titanium-induced zipper reactions)

IT 7705-07-9, Titanium trichloride, uses
RL: CAT (Catalyst use); USES (Uses)
(titanium-induced zipper reactions)

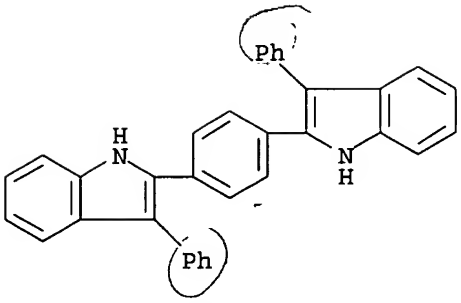
IT 2516-96-3, 2-Chloro-5-nitrobenzoic acid 164936-78-1 164936-79-2
164936-80-5 164936-81-6 164936-82-7
RL: RCT (Reactant); RACT (Reactant or reagent)
(titanium-induced zipper reactions)

IT 41051-97-2P 41051-99-4P 41052-03-3P 41052-08-8P 84902-26-1P
164936-83-8P 164936-93-0P 164936-94-1P 164936-95-2P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(titanium-induced zipper reactions)

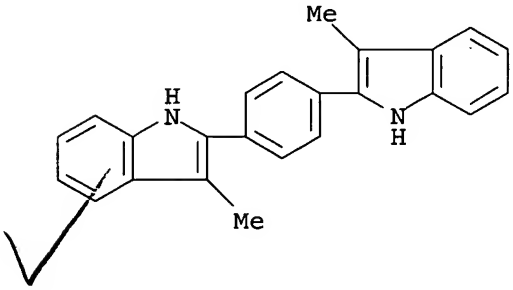
IT 164936-84-9P 164936-86-1P 164936-87-2P **164936-88-3P**
164936-89-4P 164936-90-7P 164936-91-8P 164936-92-9P
RL: SPN (Synthetic preparation); PREP (Preparation)
(titanium-induced zipper reactions)

IT **164936-88-3P 164936-89-4P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(titanium-induced zipper reactions)

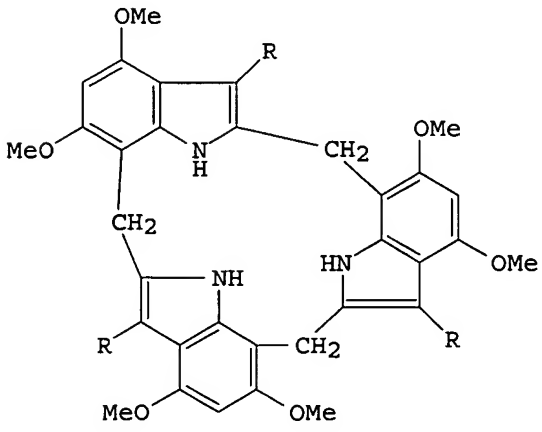
RN 164936-88-3 HCAPLUS
CN 1H-Indole, 2,2'-(1,4-phenylene)bis[3-phenyl- (9CI) (CA INDEX NAME)



RN 164936-89-4 HCAPLUS
CN 1H-Indole, 2,2'-(1,4-phenylene)bis[3-methyl- (9CI) (CA INDEX NAME)



L59 ANSWER 12 OF 28 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 1993:671129 HCAPLUS
DN 119:271129
ED Entered STN: 25 Dec 1993
TI Calix[3]indoles, new macrocyclic tris(indolylmethylene) compounds with 2,7-linkages
AU Black, David S. C.; Bowyer, Michael C.; Kumar, Naresh; Mitchell, Peter S. R.
CS Sch. Chem., Univ. New South Wales, Kensington, 2033, Australia
SO Journal of the Chemical Society, Chemical Communications (**1993**), (10), 819-21
CODEN: JCCCAT; ISSN: 0022-4936
DT Journal
LA English
CC 28-23 (Heterocyclic Compounds (More Than One Hetero Atom))
OS CASREACT 119:271129
GI



I

AB A series of macrocyclic tris(indolylmethylene) compds., e.g. I [R = (un)substituted Ph], can be obtained from 7- or 2-(hydroxymethyl)indoles or from the combination of either an indole with a bis(hydroxymethyl)-2,7'-diindolylmethane or a bis(hydroxymethyl)indole with a 2,7'-diinodolylmethane; an isomeric series can be obtained from the combination of an indole with a bis(hydroxymethyl)-2,2'-diindolylmethane.

ST calixindole; trisindolylmethylene macrocycle; hydroxymethylindole prepn cyclization; indole hydroxymethyl cyclization

IT Regiochemistry
(for cyclization of (hydroxymethyl)indole derivs.)

IT Cyclocondensation reaction
(of (hydroxymethyl)indole derivs., calixindoles from)

IT 74794-91-5 105776-29-2 151320-82-0
RL: RCT (Reactant); RACT (Reactant or reagent)
(formylation of)

IT 151320-91-1P 151320-92-2P 151320-93-3P 151320-96-6P 151320-99-9P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and acid-catalyzed cyclization of)

IT 151321-08-3P 151321-12-9P 151321-13-0P 151321-14-1P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and cyclization of)

IT 151321-03-8P 151321-04-9P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and formylation of)

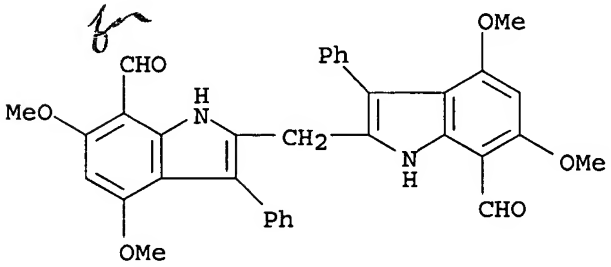
IT 100997-52-2P 151320-83-1P 151320-84-2P 151320-85-3P 151320-86-4P
151320-87-5P 151320-88-6P 151320-89-7P 151320-90-0P 151321-05-0P
151321-06-1P **151321-09-4P** 151321-10-7P 151321-11-8P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and reduction of)

IT 151320-94-4P 151320-95-5P 151320-97-7P 151320-98-8P 151321-00-5P
151321-01-6P 151321-02-7P 151321-07-2P 151321-15-2P 151321-16-3P
151321-17-4P 151321-18-5P 151321-19-6P 151321-20-9P 151321-21-0P
151321-22-1P 151321-23-2P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

IT **151321-09-4P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and reduction of)

RN 151321-09-4 HCAPLUS

CN 1H-Indole-7-carboxaldehyde, 2,2'-methylenebis[4,6-dimethoxy-3-phenyl-(9CI) (CA INDEX NAME)

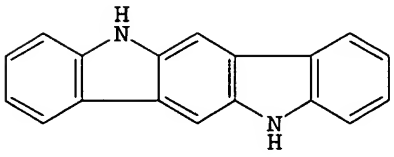


L59 ANSWER 13 OF 28 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 1993:625858 HCAPLUS

DN 119:225858

ED Entered STN: 27 Nov 1993
TI A direct synthesis of indolocarbazoles via new dinitroterphenyl precursors
AU Kistenmacher, Axel; Muellen, Klaus
CS Max-Planck-Inst. Polymerforsch., Mainz, 6500, Germany
SO Journal of Heterocyclic Chemistry (**1992**), 29(5), 1237-9
CODEN: JHTCAD; ISSN: 0022-152X
DT Journal
LA English
CC 28-2 (Heterocyclic Compounds (More Than One Hetero Atom))
GI



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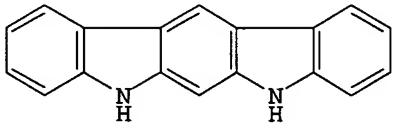
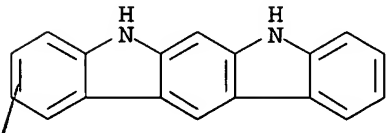


II

AB The two indolocarbazoles I and II were synthesized via the reductive ring closure of 1,4-dibromo-2,5-dinitrobenzene and 1,3-dibromo-4,6-dinitrobenzene, resp., with triethylphosphite as reducing agent in a high boiling solvent. The electrochem. behavior of the title systems is discussed.
ST indolocarbazole
IT 98-80-6, Phenylboronic acid
RL: RCT (Reactant); RACT (Reactant or reagent)
(condensation of, with dibromodinitrobenzenes)
IT 18908-08-2 24239-82-5, 1,3-Dibromo-4,6-dinitrobenzene
RL: RCT (Reactant); RACT (Reactant or reagent)
(condensation of, with phenylboronic acid)
IT 6336-32-9P **111296-90-3P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
IT 150758-04-6P 150758-05-7P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation, cyclic voltammetry, and reductive ring closure of)
IT **111296-90-3P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 111296-90-3 HCAPLUS
CN Indolo[2,3-b]carbazole, 5,7-dihydro- (6CI, 9CI) (CA INDEX NAME)



L59 ANSWER 14 OF 28 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 1987:617419 HCAPLUS
DN 107:217419
ED Entered STN: 12 Dec 1987
TI Reactivity and reaction paths of methyl-substituted bis(indolylcarbenium) ions
AU Pindur, Ulf; Mueller, Johann
CS Fachbereich Pharm., Univ. Mainz, Mainz, D-6500, Fed. Rep. Ger.
SO Journal of Heterocyclic Chemistry (**1987**), 24(1), 159-63

CODEN: JHTCAD; ISSN: 0022-152X
DT Journal
LA German
CC 27-11 (Heterocyclic Compounds (One Hetero Atom))
OS CASREACT 107:217419
GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB Me substituted bisindolylcarbenium ions I and II (R = H, Me) react with some O- and C-nucleophiles regioselectively. The cations II yield with hydroxide ions the tetraindolyldimethyl ether III and with methoxide ions the bisindolylmethoxymethanes IV. I and II react with several methylindoles to give isomeric bis- and trisindolylmethanes. An electrophilic reactivity order of cations I and II can be derived from the exptl. results.

ST indolylmethyl ether; indolylmethoxymethane; indolylmethane bis tris; regioselectivity indolylcarbenium reaction nucleophile

IT Regiochemistry
(in reaction of indolylcarbenium ion with nucleophiles)

IT Nucleophiles
(regioselective reaction of, with indolylcarbenium ion)

IT 91455-01-5P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and regioselective reaction of, with 3-methylindole)

IT 548-12-9P **91455-03-7P** 110968-20-2P 110968-21-3P
110968-22-4P 110968-23-5P 110968-24-6P 110968-25-7P 110968-26-8P
110968-27-9P 110968-28-0P **110968-29-1P** 110993-07-2P
110993-08-3P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

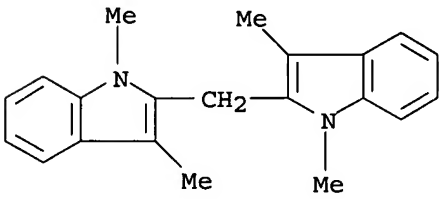
IT 100237-91-0
RL: RCT (Reactant); RACT (Reactant or reagent)
(regioselective reaction of, with 3-methylindole)

IT 83-34-1, 3-Methylindole 91-55-4, 2,3-Dimethylindole 95-20-5, 2-Methylindole 875-30-9, 1,3-Dimethylindole
RL: RCT (Reactant); RACT (Reactant or reagent)
(regioselective reaction of, with indolylcarbenium ion)

IT 91454-98-7 91455-00-4
RL: RCT (Reactant); RACT (Reactant or reagent)
(regioselective reaction of, with nucleophiles)

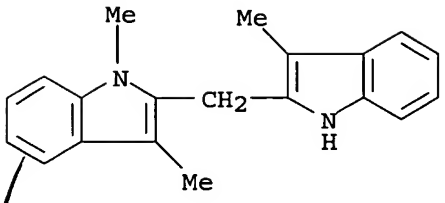
IT **91455-03-7P 110968-29-1P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

RN 91455-03-7 HCAPLUS
CN 1H-Indole, 2,2'-methylenebis[1,3-dimethyl- (9CI) (CA INDEX NAME)

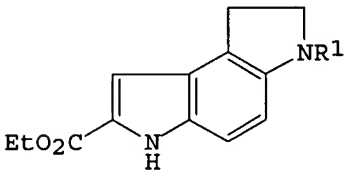


RN 110968-29-1 HCAPLUS
CN 1H-Indole, 1,3-dimethyl-2-[(3-methyl-1H-indol-2-yl)methyl]- (9CI) (CA

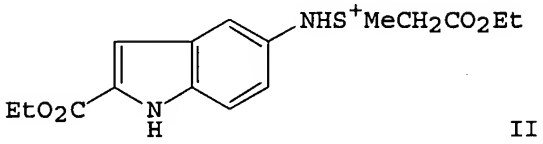
INDEX NAME)



L59 ANSWER 15 OF 28 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 1987:156119 HCAPLUS
DN 106:156119
ED Entered STN: 15 May 1987
TI Regioselective [2,3]-sigmatropic rearrangement to the pyrrolo[3,2-e]indole ring system of CC-1065
AU Warpehoski, Martha A.; Bradford, V. Susan
CS Upjohn Co., Kalamazoo, MI, 49001, USA
SO Tetrahedron Letters (**1986**), 27(24), 2735-8
CODEN: TELEAY; ISSN: 0040-4039
DT Journal
LA English
CC 26-6 (Biomolecules and Their Synthetic Analogs)
OS CASREACT 106:156119
GI



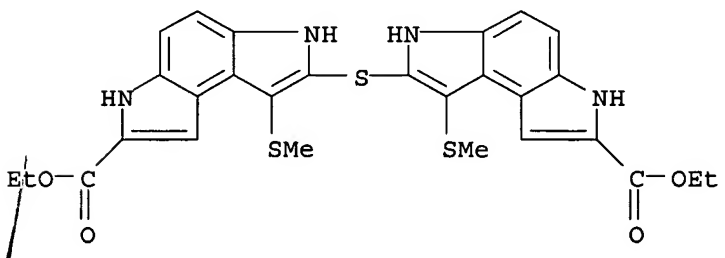
I



II

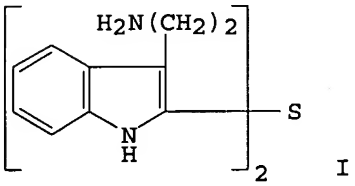
AB A short and efficient synthesis of the 1,2-dihydro-3H-pyrrolo[3,2-e]indole I (R = H, Ac) ring system of the antitumor antibiotic CC-1065 from Et 5-aminoindole-2-carboxylate was made possible by the inherent regioselectivity of the [2,3] sigmatropic rearrangement of the azasulfonium ylide II and a thiation-reduction sequence for oxindole to indoline conversion.
ST regioselective sigmatropic rearrangement pyrroloindole; antibiotic CC 1065
IT Regiochemistry
(of sigmatropic rearrangement of pyrroloindole ring system of antibiotic CC 1065)
IT Rearrangement
(sigmatropic, regiochem. of, in pyrroloindole ring system of antibiotic CC 1065)
IT 105518-45-4
RL: RCT (Reactant); RACT (Reactant or reagent)
(acetylation of)
IT 107640-63-1P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and attempted reduction of, by lithium borohydride)
IT 105518-44-3P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT

(Reactant or reagent)
(preparation and borane-trifluoroacetic acid reduction of)
IT **107640-66-4P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and desulfurization of)
IT 107640-65-3P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and hydrogenation of)
IT 107640-64-2P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and hydrogenolysis of)
IT 107640-61-9P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and intramol. cyclocondensation of)
IT 107640-62-0P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and reactions of)
IT 107640-60-8P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and rearrangement of)
IT 82221-06-5P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
IT 69866-21-3P, Antibiotic CC 1065
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of dihydropyrroloindole ring system of, by regioselective sigmatropic rearrangement of related azasulfonium ylide)
IT 71086-99-2
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with Et (methylthio)acetate)
IT 4455-13-4, Ethyl (methylthio)acetate
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with Et aminoindolecarboxylate)
IT **107640-66-4P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and desulfurization of)
RN 107640-66-4 HCAPLUS
CN Benzo[1,2-b:4,3-b']dipyrrole-2-carboxylic acid, 7,7'-thiobis[3,6-dihydro-8-(methylthio)-, diethyl ester (9CI) (CA INDEX NAME)



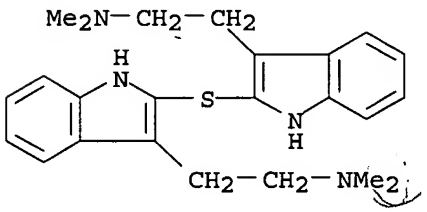
L59 ANSWER 16 OF 28 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 1985:184940 HCAPLUS
DN 102:184940

ED Entered STN: 02 Jun 1985
TI A novel serotonin antagonist 2,2'-bis[3-(2-N,N-dimethylaminoethyl)indolyl]sulfide (BDIS)
AU Chu, C. K.; Wander, J. D.; Tackett, R. L.; Iturrian, W. B.; Schmitz, J. P.; Garner, G. E.; Chae, K.
CS Coll. Pharm., Univ. Georgia, Athens, GA, 30602, USA
SO Journal of Heterocyclic Chemistry (**1984**), 21(6), 1901-3
CODEN: JHTCAD; ISSN: 0022-152X
DT Journal
LA English
CC 27-10 (Heterocyclic Compounds (One Hetero Atom))
Section cross-reference(s): 1
GI

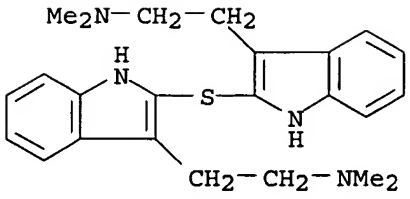


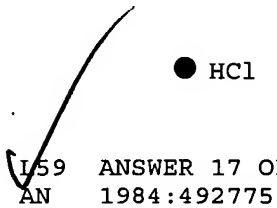
I

AB A novel serotonin antagonist, 2,2'-bis[3-(2-N,N-dimethylaminoethyl)indolyl]sulfide (I) was synthesized in 1 step from the reaction of N,N-dimethyltryptamine with SO2Cl2.
ST sulfide bisdimethylaminoethylindolyl; diindolyl sulfide dimethylaminoethyl; serotonin antagonist diindolyl sulfide
IT Neurotransmitter antagonists
(serotoninergic, bis(dimethylaminoethylindolyl) sulfide)
IT **96249-77-3P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and serotonin antagonist activity of)
IT **96249-78-4P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
IT 61-50-7
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with thionyl chloride)
IT **96249-77-3P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and serotonin antagonist activity of)
RN 96249-77-3 HCAPLUS
CN 1H-Indole-3-ethanamine, 2,2'-thiobis[N,N-dimethyl- (9CI) (CA INDEX NAME)



IT **96249-78-4P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 96249-78-4 HCAPLUS
CN 1H-Indole-3-ethanamine, 2,2'-thiobis[N,N-dimethyl-, monohydrochloride (9CI) (CA INDEX NAME)





L59 ANSWER 17 OF 28 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 1984:492775 HCAPLUS
DN 101:92775
ED Entered STN: 15 Sep 1984
TI Reactions of electron-rich heterocycles with derivatives of carboxylic ortho acids, II. Acid catalyzed reactions of 3-substituted indoles with ethyl orthoformate
AU Mueller, Johann; Pindur, Ulf
CS Inst. Pharm. Lebensmittelchem., Univ. Wuerzburg, Wuerzburg, D-8700, Fed. Rep. Ger.
SO Archiv der Pharmazie (Weinheim, Germany) (**1984**), 317(6), 555-61
CODEN: ARPMAS; ISSN: 0365-6233
DT Journal
LA German
CC 41-8 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic Sensitizers)
Section cross-reference(s): 27
OS CASREACT 101:92775
GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB I (R = Me,R1 = H) [83-34-1] and I (R = R1 = Me) [875-30-9] reacted with HC(OEt)3 [122-51-0] in acid medium to give the corresponding di- and triindolylmethanes II, III, IV, and V. IV (R = Me, R1 = H) [548-12-9] was oxidized by FeCl3 to the triphenylmethane dye VI (R = Me, R1 = H, X = ClO4) [91455-07-1]. Tryptamine-HCl (VII) [343-94-2] was formylated by HC(OEt)3 in acid medium to give 3-[2-(formylamino)ethyl]indole [6502-82-5]. Blocking of the NH2 group of VII, i.e., by Ac, followed by reaction with HC(OEt)3 in acidic MeOH gave tris[3-[2-(acetylamino)ethyl]indol-2-yl]methane [91455-06-0].
ST methylindole condensation ethyl orthoformate; indole condensation ethyl orthoformate; triindolylmethane dye; cyanine indole; diindolylmethane dye
IT Condensation reaction
(of indoles with Et orthoformate in presence of acid)
IT Dyes
(triindolylmethane derivs., preparation of)
IT 83-34-1 343-94-2 875-30-9 1016-47-3
RL: USES (Uses)
(condensation of, with Et orthoformate in presence of acid)
IT 122-51-0
RL: USES (Uses)
(condensation of, with methyl- and di-methylindole in presence of acid)
IT 91455-00-4P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and reaction with methanol)

IT 6502-82-5P 91454-96-5P 91454-98-7P 91455-01-5P **91455-03-7P** 91455-06-0P 91455-07-1P
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(preparation and spectra of)

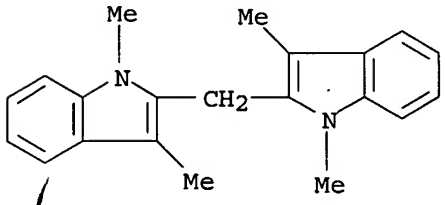
IT 91455-05-9P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

IT 548-12-9P 91455-02-6P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation, oxidation and spectra of)

IT **91455-03-7P**
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(preparation and spectra of)

RN 91455-03-7 HCAPLUS

CN 1H-Indole, 2,2'-methylenebis[1,3-dimethyl- (9CI) (CA INDEX NAME)



L59 ANSWER 18 OF 28 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 1980:471451 HCAPLUS

DN 93:71451

ED Entered STN: 12 May 1984

TI 2,3'-Bis(3-methylindolyl)methane from 3-methylindole and formaldehyde

AU Brieskorn, Carl Heinz; Huber, Johannes

CS Inst. Pharm. Lebensmittelchem., Univ. Wuerzburg, Wuerzburg, D 8700, Fed. Rep. Ger.

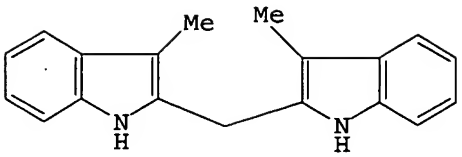
SO Archiv der Pharmazie (Weinheim, Germany) (**1979**), 312(12), 1046-51
CODEN: ARPMAS; ISSN: 0365-6233

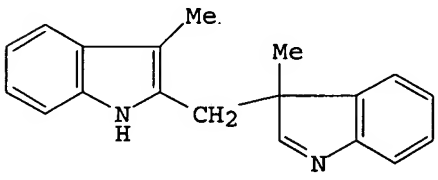
DT Journal

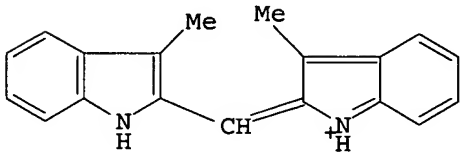
LA German

CC 27-11 (Heterocyclic Compounds (One Hetero Atom))

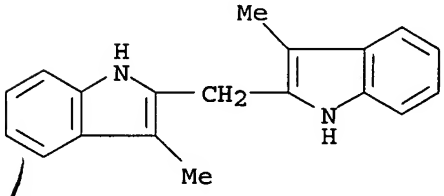
GI


I


II

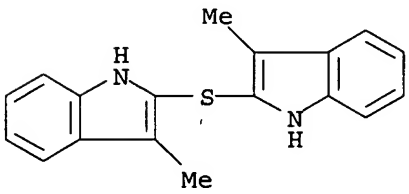

III

AB Hopkins-Cole reaction of 3-methylindole with H2CO in MeOH-H2SO4 gave I and II. II is the precursor of ion III, the color product of this reaction.
ST Hopkins Cole reaction methylindole; indole methylenebis
IT **36798-17-1P** 61995-50-4P 73251-99-7P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
IT 83-34-1 95-20-5
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with formaldehyde)
IT 50-00-0, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with methylindole)
IT **36798-17-1P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 36798-17-1 HCAPLUS
CN 1H-Indole, 2,2'-methylenebis[3-methyl- (9CI) (CA INDEX NAME)



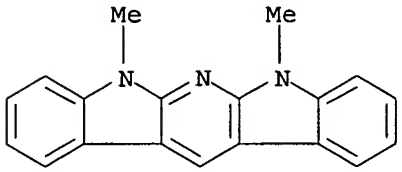
L59 ANSWER 19 OF 28 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 1975:111897 HCAPLUS
DN 82:111897
ED Entered STN: 12 May 1984
TI Reaction of skatole with iodine in the presence of thiourea
AU Hino, Tohru; Endo, Mamoru; Nakagawa, Masako
CS Fac. Pharm. Sci., Chiba Univ., Chiba, Japan
SO Chemical & Pharmaceutical Bulletin (**1974**), 22(11), 2728-31
CODEN: CPBTAL; ISSN: 0009-2363
DT Journal

LA English
CC 27-11 (Heterocyclic Compounds (One Hetero Atom))
GI For diagram(s), see printed CA Issue.
AB Skatole was treated with iodine and H2NCSNH2 in EtOH containing KI to give the indoles I (11.6%), II (23%), and III (13%), 3.4% 3-methyloxindole, 3-methyldioxindole (trace), and 2.2% bis(3-methyl-2-indolyl) sulfide. I also was prepared by treating 2-bromoskatole with H2N-CSNH2-HBr followed by KI.
ST skatole iodine thiourea; indole pseudothioureido; pseudothiourea indolyl; biindolyl oxo methyl
IT 1504-06-9P 3040-34-4P 7135-39-9P 51206-74-7P 55092-41-6P
55092-42-7P 55092-43-8P 55092-44-9P **55132-21-3P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
IT 83-34-1
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with iodine in present of thiourea)
IT 1484-28-2 2406-05-5
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with thiourea)
IT 7553-56-2, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(with of skatole in presents of thiourea)
IT 62-56-6, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(with skatole and iodine)
IT **55132-21-3P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 55132-21-3 HCAPLUS
CN 1H-Indole, 2,2'-thiobis[3-methyl- (9CI) (CA INDEX NAME)



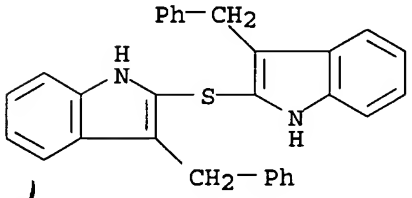
L59 ANSWER 20 OF 28 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 1974:413408 HCAPLUS
DN 81:13408
ED Entered STN: 12 May 1984
TI Novel synthesis of benzo[b]-α-carbolines
AU Sagitullin, R. S.; Mel'nikova, T. V.; Kost, A. N.
CS Mosk. Gos. Univ., Moscow, USSR
SO Vestnik Moskovskogo Universiteta, Seriya 2: Khimiya (**1974**), 15(1), 118-19
CODEN: VMUKA5; ISSN: 0579-9384
DT Journal
LA Russian
CC 28-2 (Heterocyclic Compounds (More Than One Hetero Atom))
GI For diagram(s), see printed CA Issue.
AB Benzo [b] carbolines I (R = H, 2-Me, 4-Me, 4-MeO) were prepared in 30-92% yields by reaction of 2-chloro-indole-3-carboxaldehyde (II) with RNH2. Treatment of 2-amino-1-methylindole with II gave indolocarboline III.
ST benzocarboline; indolocarboline; indoloquinoline
IT 243-38-9P **52533-16-1P** 52533-17-2P 52533-18-3P 52533-19-4P
RL: SPN (Synthetic preparation); PREP (Preparation)

(preparation of)
IT 90-04-0 95-53-4 106-49-0 36092-88-3
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with 2-chloroindole-3-carboxaldehyde)
IT 5059-30-3
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with amines)
IT 62-53-3, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(with 2-chloroindole-3-carboxaldehyde)
IT **52533-16-1P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 52533-16-1 HCAPLUS
CN Pyrido[2,3-b:6,5-b']diindole, 5,7-dihydro-5,7-dimethyl- (9CI) (CA INDEX NAME)



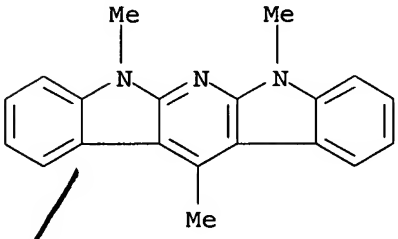
L59 ANSWER 21 OF 28 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 1974:59818 HCAPLUS
DN 80:59818
ED Entered STN: 12 May 1984
TI Preparation of 3-substituted 2-indolinethiones via diindolyl disulfides. Reaction of 3-substituted indoles with sulfur monochloride
AU Hino, Tohru; Suzuki, Toshikazu; Takeda, Sachie; Kano, Nobuko; Ishii, Yoichi; Sasaki, Akira; Nakagawa, Masako
CS Fac. Pharm. Sci., Chiba Univ., Chiba, Japan
SO Chemical & Pharmaceutical Bulletin (**1973**), 21(12), 2739-48
CODEN: CPBTAL; ISSN: 0009-2363
DT Journal
LA English
CC 27-11 (Heterocyclic Compounds (One Hetero Atom))
GI For diagram(s), see printed CA Issue.
AB The reaction of 3-alkylindoles (I) with S2Cl2 in ether gave the corresponding 2-diindolyl disulfides (II, n = 2) as the main product, and mono- and trisulfides (I, n = 1,3) as minor products. The similar reaction of 3-arylindoles gave the disulfides in good yields. Reduction of the diindolyl disulfides with NaBH4 in EtOH afforded the 2-indolinethiones (III) in good yields.
ST indolinethione diindole disulfide redn
IT Reduction
(of diindolyl disulfides, indolinethiones by)
IT 51206-68-9P **51206-69-0P** 51206-70-3P 51206-76-9P
51206-78-1P 51206-85-0P 51206-86-1P 51251-68-4P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and reduction of, indolinethiones by)
IT 4822-40-6P 13637-41-7P 19155-23-8P 33689-22-4P 33693-09-3P
33693-10-6P 33693-11-7P 33693-12-8P 33814-51-6P 51206-71-4P
51206-72-5P 51206-73-6P 51206-74-7P 51206-75-8P 51206-79-2P
51206-80-5P 51206-81-6P 51206-83-8P 51206-89-4P 51206-90-7P
51206-92-9P 51206-93-0P 51206-94-1P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

IT 875-30-9 1504-16-1 5782-23-0 16886-10-5 23543-66-0 30020-98-5
51206-77-0 51206-82-7 51206-84-9 51206-87-2 51206-91-8
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with sulfur monochloride)
IT 51206-88-3
RL: RCT (Reactant); RACT (Reactant or reagent)
(reduction of, indolinethiones by)
IT **51206-69-0P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and reduction of, indolinethiones by)
RN 51206-69-0 HCAPLUS
CN 1H-Indole, 2,2'-thiobis[3-(phenylmethyl)- (9CI) (CA INDEX NAME)



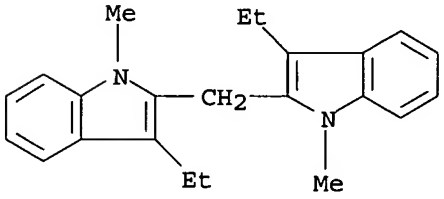
L59 ANSWER 22 OF 28 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 1974:3413 HCAPLUS
DN 80:3413
ED Entered STN: 12 May 1984
TI Indole chemistry. XXXVIII. Cleavage of a carbon-carbon bond during the reaction of 2-aminoindoles with difunctional compounds
AU Mel'nikova, T. V.; Kost, A. N.; Sagitullin, R. S.; Borisov, N. N.
CS Mosk. Gos. Univ. im. Lomonosova, Moscow, USSR
SO Khimiya Geterotsiklicheskikh Soedinenii (**1973**), (9), 1273-8
CODEN: KGSSAQ; ISSN: 0132-6244
DT Journal
LA Russian
CC 28-2 (Heterocyclic Compounds (More Than One Hetero Atom))
GI For diagram(s), see printed CA Issue.
AB Indolocarboline (I; R = R1 = Me) was obtained in 43% yield by treatment of the aminoindole II with Me2C:CHCOMe in DMF at 10°. Analogously obtained were .apprx.80% I (R = Me, PhCH2, R1 = Ph) from PhCH:CR2CO2Et (R2 = CN, CO2Et) and the appropriate indole. I (R = Me, PhCH2, R1 = p-Me2NC6H4) were obtained in 30% and 80% yields by base-catalyzed condensation of indoline (III) with the appropriate 2-aminoindole.
ST indolocarboline; condensation unsatd carbonyl aminoindole
IT 13174-97-5P 13315-71-4P 17276-85-6P **29970-52-3P**
29970-53-4P 29970-56-7P 29970-63-6P 50426-41-0P 50793-70-9P
50793-71-0P 50931-37-8P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
IT 50980-55-7
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with 1-benzyl-2-aminoindole)
IT 625-33-2
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with 2-aminoindole hydrochloride)
IT 42456-82-6
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with diacetone alc.)
IT 50449-36-0
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with p-dimethylaminobenzaldehyde)

IT 27878-37-1
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with unsatd. ketones)
IT **29970-52-3P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 29970-52-3 HCAPLUS
CN Pyrido[2,3-b:6,5-b']diindole, 5,7-dihydro-5,7,12-trimethyl- (8CI, 9CI) (CA INDEX NAME)

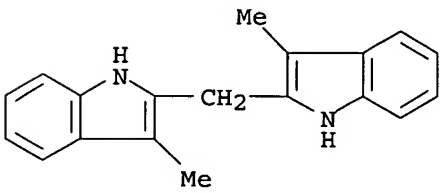


L59 ANSWER 23 OF 28 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 1972:405277 HCAPLUS
DN 77:5277
ED Entered STN: 12 May 1984
TI Light-induced reactions of α-(N-alkylanilino) ketones. Formation of diindolylmethanes
AU Hill, J.; Townend, J.
CS Dep. Chem., Univ. Salford, Salford, UK
SO Journal of the Chemical Society, Perkin Transactions 1: Organic and Bio-Organic Chemistry (1972-1999) (**1972**), (9-10), 1210-19
CODEN: JCPRB4; ISSN: 0300-922X
DT Journal
LA English
CC 27-11 (Heterocyclic Compounds (One Hetero Atom))
Section cross-reference(s): 25
AB Irradiation of 6 α-(N-alkylanilino) ketones, PhN(CH2R)CHR1COMe (I; R, R1 = H, Me, or Ph), in MeOH, Me2CHOH, or benzene caused fission of the α C-N bond giving a secondary amine (PhNHCH2R), a ketone (R1CH2COMe), an α-[p-(alkylamino)phenyl] ketone formed by para rearrangement, and a substituted 2-methylindole formed by ortho rearrangement with subsequent cyclodehydration. I (R1 = H) also gave a diindol-3-ylmethane derived from the 2-methylindole. Irradiation of I with 1,2-dimethylindole gave diindolylmethanes, via 1-phenylazetidinols as labile intermediates. Irradiation of 7 anilino ketones PhNRCH2COR1 (R = H, Me, or Me3C; R1 = Me, Et, Me3C, or Ph) was also studied.
ST irradn alkylanilino ketone; diindolylmethane anilino ketone irradn; indolylmethane anilino ketone irradn
IT Ketones, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(alkylanilino, irradiation of)
IT Photolysis
(of alkylanilino ketones)
IT 5883-81-8 15885-06-0 27862-73-3 31399-19-6 32119-53-2 36798-40-0 36798-41-1 36798-42-2 36810-72-7 36810-74-9 36810-75-0 36810-78-3 36810-79-4 36810-80-7
RL: PROC (Process)
(irradiation of)
IT 17371-60-7P 36798-43-3P 36798-44-4P 36798-45-5P 36798-46-6P 36798-47-7P 36798-48-8P 36798-49-9P 36798-50-2P 36798-51-3P 36798-52-4P 36798-53-5P 36798-54-6P 36798-55-7P **36798-56-8P** 36798-57-9P

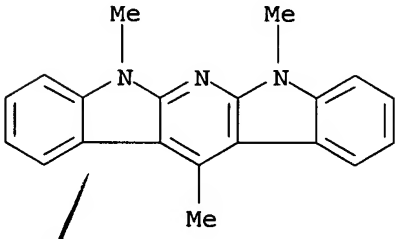
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
IT **36798-56-8P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 36798-56-8 HCAPLUS
CN 1H-Indole, 2,2'-methylenebis[3-ethyl-1-methyl- (9CI) (CA INDEX NAME)



L59 ANSWER 24 OF 28 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 1972:405273 HCAPLUS
DN 77:5273
ED Entered STN: 12 May 1984
TI Synthesis of 2,2'-methylenediindole derivatives. Chemistry of the Hopkins-Cole reaction
AU Brieskorn, Carl H.; Mechtold, Gerhard
CS Inst. Pharm. Lebensmittelchem., Univ. Wurzburg, Wuerzburg, Fed. Rep. Ger.
SO Zeitschrift fuer Lebensmittel-Untersuchung und -Forschung (**1972**), 147(6), 338-42
CODEN: ZLUFAR; ISSN: 0044-3026
DT Journal
LA German
CC 27-11 (Heterocyclic Compounds (One Hetero Atom))
Section cross-reference(s): 80
GI For diagram(s), see printed CA Issue.
AB The Hopkins-Cole reaction was used to identify 3-indolyl derivs. With CH2O and 3-methylindole (I) a 2-hydroxymethylene compound was formed initially; a second step gave II (R1 = Me, R2 = H). Reaction of I and HCOCO2H gave II (R1 = Me, R2 = CO2H) which decarboxylated immediately. II (R1 = Me, R2 = CO2Me) was isolated if MeOH was the solvent. II (R1 = CH2CO2Me, (CH2)2CO2Me, (CH2)2CO2H, CH2CONHNH2, R2 = H) were also prepared Oxidation of II gave colored methylidyne derivs.
ST indole methylene Hopkins Cole; analysis indole Hopkins Cole; color reagent Hopkins Cole; reagent color Hopkins Cole
IT 33186-56-0P **36798-17-1P** 36798-18-2P 36798-20-6P 36798-21-7P 36798-22-8P 36907-84-3P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
IT **36798-17-1P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 36798-17-1 HCAPLUS
CN 1H-Indole, 2,2'-methylenebis[3-methyl- (9CI) (CA INDEX NAME)

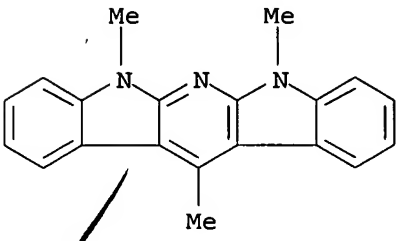


L59 ANSWER 25 OF 28 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 1972:153639 HCAPLUS
DN 76:153639
ED Entered STN: 12 May 1984
TI Indole chemistry. XXVIII. 2-Oxo-α-carbolines
AU Borisov, N. N.; Sagitullin, R. S.; Kost, A. N.
CS Mosk. Gos. Univ. im. Lomonosova, Moscow, USSR
SO Khimiya Geterotsiklicheskikh Soedinenii (**1972**), (1), 48-54
CODEN: KGSSAQ; ISSN: 0132-6244
DT Journal
LA Russian
CC 28 (Heterocyclic Compounds (More Than One Hetero Atom))
GI For diagram(s), see printed CA Issue.
AB I (R = Me, PhCH2, R1 = H, Me, Ph, p-O2NC6H4, R2 = H, Et, Ph, PhCH2) were obtained (16-97%) by treating 2-aminoindoles with β-oxoesters or dike-tenes.
ST carboline aminoindole; indole carboline
IT **29970-52-3P** 36156-79-3P 36156-80-6P 36156-81-7P
36156-82-8P 36156-83-9P 36156-84-0P 36156-85-1P 36156-86-2P
36156-87-3P 36156-88-4P 36156-89-5P 36157-03-6P 36157-04-7P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
IT **29970-52-3P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 29970-52-3 HCAPLUS
CN Pyrido[2,3-b:6,5-b']diindole, 5,7-dihydro-5,7,12-trimethyl- (8CI, 9CI) (CA INDEX NAME)



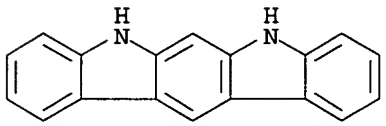
L59 ANSWER 26 OF 28 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 1971:3532 HCAPLUS
DN 74:3532
ED Entered STN: 12 May 1984
TI Indole chemistry. XVII. Condensation of 2-aminoindoles with aldehydes
AU Sagitullin, R. S.; Kost, A. N.; Matveeva, E. D.; Nemudrova, N. I.
CS Mosk. Gos. Univ. im. Lomonosova, Moscow, USSR
SO Khimiya Geterotsiklicheskikh Soedinenii (**1970**), (7), 920-2
CODEN: KGSSAQ; ISSN: 0132-6244
DT Journal
LA Russian
CC 28 (Heterocyclic Compounds (More Than One Hetero Atom))
GI For diagram(s), see printed CA Issue.
AB Equimolar quantities of I, aldehyde, and KOH were kept in 10 ml EtOH 12 hr under an inert gas at room temperature to give II (R, R1, m.p., and yield given): Me, Me, 265-6°, 67; Me, Ph, 288-90°, 72; Me, 3,4-(MeO)2C6H3, 284-8°, 89; Me, p-MeOC6H4, 284-6°, 64; Me, p-Me2NC6H4, 297-9°, 77; Me, p-ClC6H4, 314-15°, 81; Me, o-ClC6H4, 310-12°, 66; Me, p-Br-C6H4, 328-9°, 77; Me, p-O2NC6H4, 286-8°, 99; Me, m-O2N-C6H4, 345-6°, 79; PhCH2,

Me, 244-6°, 55; PhCH2, Ph, 288-90°, 98.
ST indolopyridines prepn; pyridines diindolo
IT Aldehydes, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(condensation of, with aminoindole derivs.)
IT Condensation, chemical
(of aldehydes with aminoindole derivs.)
IT Indole, 2-amino-, derivs.
RL: RCT (Reactant); RACT (Reactant or reagent)
(condensation of, with aldehydes)
IT **29970-52-3P** 29970-53-4P 29970-54-5P 29970-55-6P
29970-56-7P 29970-57-8P 29970-58-9P 29970-59-0P 29970-60-3P
29970-61-4P 29970-62-5P 29970-63-6P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
IT **29970-52-3P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 29970-52-3 HCAPLUS
CN Pyrido[2,3-b:6,5-b']diindole, 5,7-dihydro-5,7,12-trimethyl- (8CI, 9CI)
(CA INDEX NAME)



L99 ANSWER 27 OF 28 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 1961:124767 HCAPLUS
DN 55:124767
OREF 55:23489g-i
ED Entered STN: 22 Apr 2001
TI Preparation of some condensed ring carbazole derivatives
AU Grotta, Henry M.; Riggle, Charles J.; Bearse, Arthur E.
CS Battelle Mem. Inst., Columbus, OH
SO Journal of Organic Chemistry (**1961**), 26, 1509-11
CODEN: JOCEAH; ISSN: 0022-3263
DT Journal
LA Unavailable
CC 10G (Organic Chemistry: Heterocyclic Compounds)
OS CASREACT 55:124767
AB A solution of 10 g. p-(PhNH)2C6H4 in 45 ml. Me2C6H4 was passed over 38 g. 2% Pt-MgO catalyst at 560° during 255 min. with H (170 ml./min.) and H2O (6.5 g./hr.). The Me2C6H4-insol. portion of the product, recrystd. from quinoline, gave 0.95 g. indolo[3,2-b]carbazole (I), light yellow crystals, decomposing above 470°. I was also prepared by the Sn-HCl reduction of urorosein (Fearon and Boggust, CA 44, 7904d). Similar treatment of 22 g. molten m-(PhNH)2C6H4 at 500°, followed by MeOH extraction and Me2C6H4 recrystn. of the MeOH-insol. residue gave 0.7 g. indolo[2,3-b]carbazole (II), m. 358-60°. This catalytic dehydrogenation method was also used to convert N-phenyl-2-naphthylamine to 2,3-benzocarbazole and N-phenyl-1-naphthylamine to 1,2-benzocarbazole, but failed to give the correspondingly substituted carbazole from p-FC6H4NHPh, Ph2NEt, (p-MeC6H4)2NH, or p-HOC6H4NHPh. Infrared spectra for I and II were given.
IT Infrared spectra

(of carbazole derivs.)
IT 86-74-8, Carbazole
(condensed-ring analogs)
IT 239-01-0, 11H-Benzo[a]carbazole 243-28-7, 5H-Benzo[b]carbazole 6336-32-9, Indolo[3,2-b]carbazole, 5,11-dihydro- **111296-90-3**, Indolo[2,3-b]carbazole, 5,7-dihydro-
(preparation of)
IT **111296-90-3**, Indolo[2,3-b]carbazole, 5,7-dihydro-
(preparation of)
RN 111296-90-3 HCAPLUS
CN Indolo[2,3-b]carbazole, 5,7-dihydro- (6CI, 9CI) (CA INDEX NAME)



L59 ANSWER 28 OF 28 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 1957:1737 HCAPLUS
DN 51:1737
OREF 51:**363f-i,364a-d**
ED Entered STN: 22 Apr 2001
TI Preparation of indolocarbazoles. VIII. Preparation of 1-methylindolo[2',3'-2,3]carbazole
AU Swindells, Margaret L.; Tomlinson, Muriel L.
CS Univ. Oxford, UK
SO Journal of the Chemical Society, Abstracts (1956) 1135-8
CODEN: JCSAAZ; ISSN: 0590-9791
DT Journal
LA Unavailable
CC 10 (Organic Chemistry)
AB cf. C.A. 50, 4924f. 1-Methylindolo-[2',3'-2,3]carbazole (I) was prepared from 7-amino-1,2,3,4,10,11-hexahydro-8-methylcarbazole (II) and 2-hydroxycyclohexanone (III). It was difficult to acylate 8-chloro-1,2,3,4tetrahydrocarbazole (IV) and the corresponding 8-Me compound (V). IV (5.8 g.) in Et2O added gradually to a solution of EtMgBr (from 4.7 g. EtBr), the solution refluxed 5 min. and slowly treated with 2.7 g. AcCl in Et2O after 1 hr. dilute H2SO4 added, and the residue distilled gave unchanged IV and 9-acetyl-8-chloro-1,2,3,4-tetrahydrocarbazole (VI), b0.1 155-65°, m. 88° (from MeOH). VI hydrolyzed with aqueous alc. KOH gave IV. V (86 g.), 160 cc. HCl, 160 cc. EtOH, and 160 g. Sn heated 4-5 hrs., the solution decanted from the Sn, the alc. removed, the solution treated with 800 cc. 40% NaOH, and steam distilled gave 75% 8-methyl-1,2,3,4,10,11-hexahydrocarbazole (VII), needles, m. 48°; HCl salt, prisms, m. 216°; 9-Ac derivative, plates, m. 89°; 9-Bz derivative, needles, m. 114° (from alc.). IV (24 g.) similarly reduced 4-5 hrs. with Sn and HCl gave 2 g. 8-chloro-1,2,3,4,10,11-hexahydrocarbazole (VIII), a colorless liquid; 9-Ac derivative, needles, m. 78.5-9.5°; HCl salt, prisms, m. 199-206° (decomposition); picrate, m. 144°. VII (10.8 g.) in 100 cc. H2SO4 treated 15 min. at 3° with 5.8 g. KNO3, poured on ice, neutralized at 0° with NH4OH, and purified yielded 9.6 g. 1,2,3,4,10,11-hexahydro-8-methyl-7-nitrocarbazole (IX), yellow plates, m. 67-70°, raised to 71.5-2.5° by further recrystn.; 9-Ac derivative (X), prisms, m. 178-9°. IX (3 g.) in ligroine run on Al2O3 and eluted with ligroine-C6H6 and finally C6H6 and a study of the fractions indicated one product, and no 5-NO2 compound present. 8-Chloro-1,2,3,4,10,11-hexahydro-7-nitrocarbazole, needles, m. 158-9° (from 75% alc.), was similarly prepared from VIII. IX (1.5 g.) reduced with PtO2 and H in MeOH yielded II

as a liquid that solidified to a glass at 0° recrystn. gave light brown prisms, m. 125-35° (decomposition); 7-acetamido-9-acetyl analog (XI), prisms, m. 208-4°. A similar reduction of X also gave II, converted by acetylation into XI. 9-Acetyl-7-aminohexahydrocarbazole (1.5 g.) heated with 0.7 g. III at 120-30° until evolution of H2O ceased, HCl added, and the temperature raised to 135-45° yielded 1.3 g. 9-acetyl-4',5,5',6,6',7,7',8,12,13-decahydro-1-methylindolo[2',3'-2,3]carbazole (XII), prisms, m. 284-5° (from 90% AcOH). XII (0.5 g.) refluxed 20 min. with 10 cc. H3SO4 and 10 cc. H2O, gave 0.4 g. dark green powder which would not be crystallized; it was heated 1.5 hrs. at 320-30° with Pd-C with CO2 to give 0.2 g. crude I, m. 278-80° (from C6H6), after sublimation and crystallization The m.p. was depressed to 245-50° when mixed with 3-methylindolo[3',2'-1,2] carbazole, m. 257°, prepared by dehydrogenation of 3-methyl-4',5,5',6,6'7,7',8-octahydroindolo[3',2'-1,2]carbazole (C.A. 49, 2412c). II (0.7 g.) and 0.4 g. III and a little HCl at 120-30° gave prisms, m. 290-300° (decomposition) (from AcOH), which appeared to be 1,2,3,4,10,11-hexahydro-8-methyl-7-(2-oxocyclohexylamino)carbazole AcOH (XIII). Heating 0.4 g. XIII with Pd-C as above gave I, identical with that prepared from XII, λ 240, 265, 275, 306, 344, 360 mμ (log ε 4.614, 4.547,4.538, 4.794, 4.055, and 4.131), which gave a violet solution in H2SO4, changing to blue-green and fading to reddish brown on addition of HNO3, and was unaffected by refluxing in Ac2O, charring if a little H2SO4 were added to the solution

IT Ring closure or formation
(heterocyclic N compds. by)

IT Ultraviolet and visible, spectra
(of 5,7-dihydro-6-methylindolo[2,3-b]carbazole)

IT Benzophenone, 3-(5-benzoyl-1H-benzotriazol-1-yl)-
Carbazole, 2,6-dibenzoyl-
Carbazole, 2-acetyl-2-benzoyl-
Carbazole, 2-acetyl-2-benzoyl-9-methyl-
Carbazole, 6-acetyl-6-benzoyl-
Carbazole, 6-acetyl-6-benzoyl-9-methyl-

IT 100116-42-5, Carbazole, 8-chloro-1,2,3,4,4a,9a-hexahydro-
(and salts)

IT 7727-37-9, Nitrogen
(compds., heterocyclic)

IT 86-74-8, Carbazole
(derivs.)

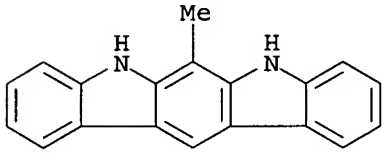
IT 100119-20-8, Carbazole, 8-chloro-1,2,3,4,4a,9a-hexahydro-7-nitro-
100615-55-2, Carbazole, 1,2,3,4,4a,9a-hexahydro-8-methyl-7-nitro-
100709-39-5, Carbazole, 9-acetyl-8-chloro-1,2,3,4-tetrahydro-
100958-16-5, Carbazole, 9-acetyl-1,2,3,4,4a,9a-hexahydro-8-methyl-7-nitro-
101273-74-9, Carbazole, 2,6-diacetyl- 101442-01-7, Carbazole, 2,6-diacetyl-9-methyl- 101602-72-6, Carbazole, 7-acetamido-9-acetyl-1,2,3,4,4a,9a-hexahydro-8-methyl- 101937-55-7, Carbazole, 9-acetyl-8-chloro-1,2,3,4,4a,9a-hexahydro- 102024-02-2, Ketone, 9-methylcarbazol-2-yl phenyl 102319-63-1, Cyclohexanone, 2-[(4b,5,6,7,8,8a-hexahydro-1-methylcarbazol-2-yl)amino]-(?) 103035-45-6, Carbazole, 2,6-dibenzoyl-9-methyl- 103265-38-9, Carbazole, 2,6,9-tribenzoyl- 105341-03-5, Benzophenone, 3-amino-4,4''-iminodi- 107203-22-5, Carbazole, 1,2,3,4,4a,9a-hexahydro-8-methyl-, hydrochloride 107203-23-6, Carbazole, 1,2,3,4,4a,9a-hexahydro-8-methyl- 108839-90-3, Carbazole, 9-acetyl-1,2,3,4,4a,9a-hexahydro-8-methyl- 109813-81-2, Benzophenone, 4-(m-acetylanilino)-3-nitro- 109937-16-8, Carbazole, 9-benzoyl-1,2,3,4,4a,9a-hexahydro-8-methyl- 110436-03-8, Carbazole, 6-acetyl-2-benzoyl-9-methyl- 110436-49-2, Carbazole, 2-acetyl-6-benzoyl-9-methyl- 110746-69-5, Carbazole, 6-acetyl-2-benzoyl-110747-41-6, Carbazole, 2-acetyl-6-benzoyl- 112300-72-8, Indolo[2,3-b]carbazole, 5-acetyl-1,2,3,4,4a,5,7,8,9,10,11,12b-dodecahydro-6-methyl- 112321-82-1, Carbazole, 2,9-diacetyl-6-benzoyl- 112322-36-8, Carbazole, 2,6-diacetyl-9-benzoyl- **112485-52-6**,

Indolo[2,3-b]carbazole, 5,7-dihydro-6-methyl- 114303-32-1, Cyclohexanone, 2-[(4b,5,6,7,8,8a-hexahydro-1-methylcarbazol-2-yl)amino]-(?), compound with AcOH 116027-36-2, Carbazole, 6-acetyl-2,9-dibenzoyl- 116027-37-3, Carbazole, 9-acetyl-2,6-dibenzoyl- 116028-66-1, Carbazole, 2-acetyl-6,9-dibenzoyl- 117372-66-4, Benzophenone, 3-nitro-4,4''-iminodi- (preparation of)

IT **112485-52-6**, Indolo[2,3-b]carbazole, 5,7-dihydro-6-methyl- (preparation of)

RN 112485-52-6 HCAPLUS

CN Indolo[2,3-b]carbazole, 5,7-dihydro-6-methyl- (6CI, 9CI) (CA INDEX NAME)



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FILE 'REGISTRY' ENTERED AT 06:33:00 ON 24 FEB 2005
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L2 1 S L1 CSS SAM

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E SRI/PA,CS
E SRI IN/PA,CS
L4 4197 S SRI INT?/PA,CS
L5 11957 S SRI?/PA,CS
E JONG L/AU
L6 29 S E3,E4,E12
E CHAO W/AU
L7 74 S E3,E11,E17,E24
L8 3312 S ?INDOL?(L)?CARBAZOL?
L9 1 S L4-L7 AND L8 NOT DIMER
L10 1 S L3,L9
SEL RN

FILE 'REGISTRY' ENTERED AT 06:45:31 ON 24 FEB 2005
L11 80 S E1-E80
L12 54 S L11 AND NR>=4
L13 STR L1
L14 STR L13
L15 50 S L14
L16 65882 S L14 FUL
L17 STR L13
L18 2 S L17 SAM SUB=L16
L19 155 S L17 FUL SUB=L16
SAV L19 SHIAO772A/A
L20 STR L1
L21 5 S L20 SAM SUB=L16
L22 623 S L20 FUL SUB=L16
SAV L22 SHIAO772B/A
L23 25 S L11 AND L19,L22
L24 29 S L12 NOT L23

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L25          108 S L19 NOT (CCS OR PMS OR MNS OR AYS)/CI
L26           10 S L25 AND (C24H20N2 OR C22H14N4O6 OR C32H30I2N2O4 OR C26H18N4O8
L27            8 S L26 NOT (3882-39-1 OR 161011-38-7)
                 SAV L27 SHIAO772C/A
L28              STR L20
L29            7 S L28 CSS SAM SUB=L22
L30              STR L28
L31            3 S L30 CSS SAM SUB=L22
L32           82 S L30 CSS FUL SUB=L22
                 SAV L32 SHIAO772D/A
L33           76 S L32 NOT L23
L34           72 S L33 NOT IUM
L35           10 S L34 AND (C21H22N2 OR C18H16N2S OR C28H26N4O4S3 OR C24H30N4S O
                 SAV L35 SHIAO772E/A
L36              STR L30
L37            7 S L36 SAM SUB=L22
L38          109 S L36 FUL SUB=L22
                 SAV L38 SHIAO773F/A
L39           90 S L38 NOT L23
L40           19 S L38 AND L23
L41           11 S L39 AND (C20H14N4 OR C19H15N3 OR C18H14N2S OR C20H17N3 OR C20
L42           10 S L41 NOT SPIRO
                 SAV L42 SHIAO773G/A
L43           53 S L23,L27,L35,L42
                 SAV L43 SHIAO773H/A
L44          514 S L22 NOT L38
L45          498 S L44 NOT L43
L46          333 S L45 NOT IUM
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L51            2 S E81-E82
L52            1 S L51 NOT POLLOCK ?/AU
L53           32 S L43
L54            1 S L52 AND L53
L55            1 S L53 AND L3-7
L56            1 S L10,L55
L57           30 S L53 NOT L54,L56
L58           26 S L57 AND (PD<=20020820 OR PRD<=20020820 OR AD<=20020820)
L59           28 S L54,L56,L58
L60            4 S L53 NOT L59

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